

DEFENSE ACQUISITION WORKFORCE MODERNIZATION

by

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Executive Summary.

To a large degree, DoD's organization, processes, and workforce have all been inherited from a time when the United States faced a unique threat from the Soviet Union. Today, this singular threat has been replaced by a series of distributed and complex threats (to include failed and failing states, the proliferation of weapons of mass destruction; and growing threats from global terrorist organizations) that have proven far more difficult to satisfactorily address. This volatile international security environment makes it difficult to project, with any level of confidence, the specific threats that the nation may face, even a short time from now. Furthermore, additional environmental considerations such as rapidly changing technology, a wide array of new military operations, significant budgetary pressure, and many legislative and regulatory changes, all serve as added factors impacting the state of DoD acquisition and the members of its workforce.

In this latter case, the impact of these considerations on the acquisition workforce has been significant—demanding new skills and acquisition strategies, as well as additional personnel to successfully meet the emergent challenges of the twenty-first century. For example, changing technological and operational requirements, and decisions to outsource many non-inherently-governmental support services (such as many logistics support functions), have created additional acquisition workforce complexity, requiring members to have different skill-sets (e.g. more of a focus on management and oversight), and a wider knowledge-base to draw from. Furthermore, emergent acquisition requirements have resulted in greater contractor support for the acquisition workforce. Recently, this support has been met with resistance, because of ambiguity in what work is considered to be “inherently governmental” and the potential for conflicts of interest. As a result, there has been an emerging belief that many “contractor augmented” support services should be brought back in-house (using Federal employees) through the practice of “in-sourcing.” However, this, too, has been highly controversial; raising issues of higher costs, less flexibility, required training, needed skills, etc.

At the same time, there has been a high demand for contingency contracting to support contingency operations, placing an additional burden on the acquisition workforce—often resulting in a shortage of qualified individuals, willing to accept the risks required for doing their current job in a hostile military environment. Finally, the increased demand for workforce members to perform rapid acquisitions—to help military forces respond to quickly evolving asymmetric threats—places additional cost, schedule, and performance accountability burdens upon acquisition personnel. Finally, during the post-Cold War period of the 90s, there was a dramatic drawdown of the acquisition workforce (corresponding to the reducing in the defense budget), but with the subsequent rapid build-up in the post 9/11 period there was not a corresponding build up in the acquisition workforce (in-fact, in the mid-90s, Congress mandated a 25 percent further reduction, which was not brought back after the budget build-up). And this quantitative reduction was matched by a reduction in General Officers and SES acquisition positions. When all these factors are taken into account, they contribute to a unique and complex environment for the current acquisition workforce. In this context, the major elements of the acquisition workforce, the political appointees, military personnel and civilians, each encounter several challenges which make it difficult for them to successfully meet twenty-first century military requirements.

Political appointees represent the most senior members of the acquisition community and they are charged with serving a wide-variety of roles, including managing members of the acquisition workforce, executing and interpreting DoD policy, and contributing directly to making program decisions. In recent years, the confirmation process and qualifications necessary for political appointments have proven to be difficult impediments to recruiting and fulfilling staffing requirements for these highly important positions. Furthermore, the ethics restrictions that are required of nominees are more stringent now than ever before, contributing to many potential nominees becoming hesitant to agree to their terms. Finally, the introduction of waivers to circumvent minimum experience qualification standards for political appointments has also undermined the original intent of these requirements for senior political appointees.

In addition to political appointees, military members of the acquisition workforce provide an added point of accountability and unique perspectives, as warfighters themselves involved in the acquisition process. Currently, the number of military acquisition personnel has been significantly reduced. Furthermore, there has been a general lack of well-trained personnel fulfilling acquisition duties, such as those working in contingency contracting environments or serving as Contracting Officer Representatives (CORs). We believe these factors have directly contributed to problems with effective management of DoD acquisition programs by adding additional burdens to civilian and contractor personnel, in addition to increasing the prospects for fraud, waste and abuse.

Finally, civilian personnel represent the largest portion of the acquisition workforce. These members serve numerous roles in contracting, research and development, and program management. Currently, major reductions in personnel (a decrease by almost half between 1989 and 1999); and, the aging of the workforce (in 2005 “Baby Boomers” and “Silent Generation” employees made up roughly 76 percent of acquisition personnel) have negatively impacted the current state of the civilian acquisition workforce (United States Government Accountability Office, 2002) (Undersecretary of Defense for Acquisition, 2007). More specifically, these factors have contributed to: significant differences in workforce generations; a lack of technical skills and experience within the workforce; and, the emergence of career government employees with little or no industrial experience.

Given the above-noted changes to the state of the acquisition environment and the workforce, we believe that the desired state of the acquisition workforce for the twenty-first century should be one that centers on the concept of the “smart buyer.” The “smart buyer” is one who is value focused, and has the requisite technical skills and experience to ensure the DoD is buying the proper systems and services, in the appropriate manner. To meet these requirements, we suggest that DoD’s acquisition workforce should: have stable leadership; be flexible; be technologically savvy; be focused on performance; gain broad-based experience; and, behave at the highest ethical level.

To achieve our vision for an acquisition workforce based upon the “smart buyer” model, DoD must overcome several challenges. First, due to low pay, DoD will likely encounter difficulties in trying to retain high-caliber acquisition personnel. In particular, we believe DoD will have difficulty retaining those who either have portable retirement benefits, or have already reached retirement service requirements. Second, problems with recruitment often occur as a result of: a shrinking talent pool; the inability of potential candidates to meet citizenship (or security clearance) requirements; and, a highly inefficient application process. Third, experience gaps are also detrimental to DoD’s modernization efforts as employees often do not have the right mix of skills needed to effectively function in the twenty-first century acquisition environment. Fourth, a blended workforce (composed of military, civilian and contractor personnel) requires a unique approach to management, and presents a host of additional problems including: ambiguity in the definition of “inherently governmental” work that must be performed by DoD personnel; difficulty avoiding conflicts-of-interest; and, an incomplete view of the workforce’s composition (as reflected in policies and practices).

In order to overcome these challenges to achieving an acquisition workforce transformation, we recommend the following initiatives be implemented DoD-wide:

1. **Increased stability for senior leadership.** To the degree possible, senior government leaders must ensure that there is program continuity, especially with key program leaders. All possible actions should be taken, and incentives created, to ensure consistent program leadership by maintaining the stability of key personnel.
2. **Develop the required human capital.** In order to effectively develop the required human capital for the modern acquisition environment, we believe that DoD must: enhance recruitment by focusing on employing entry-level/mid-level acquisition personnel through expanding internships and collaborative educational programs; accelerate efforts to streamline hiring processes; strive for achievement of a high-quality, not merely a high-quantity, workforce; provide competitive wages, through revision of

compensation packages to ensure current employees and potential hires are paid salaries comparable to the private sector; continue to undertake pilot programs to examine the benefits of incentivizing employees for improved performance; and, provide employees added incentives for additional training and education.

3. **Improve workforce agility.** To improve workforce agility, we believe DoD must: expand the use of rotational programs between Government, academia and industry; as well as, eliminate the disincentives for civilian workforce members to deploy (through additional financial compensation, the introduction of supplemental life-insurance and long-term-care benefits); as well as the introduction of pre-deployment training.
4. **Adapt to the blended workforce and partnering environment.** In order to effectively function within a blended workforce and government/industry partnering environment, we believe DoD must: clearly identify “inherently governmental” by critically examining the current use of definitions such as those proposed in the draft Office of Management and Budget, Office of Federal Procurement Policy Memo of March 31, 2010¹ (which we believe to be too broad, by including work that is in support of inherently-governmental functions, and work that is “critical”—since all work could be easily interpreted as fitting into this category). Additionally, we believe DoD must continue to develop approaches to eliminate organizational and personal conflicts-of-interest.

The current state of the acquisition workforce is undeniably inadequate to meet the demands of twenty-first century national security requirements. We firmly believe that through implementation of our recommendations, the acquisition workforce can be successfully transformed to one which is composed of highly capable, “smart-buyers.” This must be viewed as one of DoD’s top priorities—the nation’s security depends on it.

¹ A draft memo was recently published by the Office of Management and Budget, Office of Federal Procurement Policy in the Federal Register: March 31, 2010 (Volume 75, Number 61) and was titled “Work Reserved for Performance by Federal Government Employees.”

I. Introduction.

The Department of Defense (DoD) is the single largest buyer in the world, spending approximately \$393.5 billion, in FY 2008, for a range of goods and services to meet their mission requirements (United States Department of Defense, 2009). While some of this spending is for goods and services, such as laptops, fuel oil, and food stuffs that are readily available and can be purchased from the commercial marketplace, there are also acquisitions for specialized systems, such as jet fighters, precision munitions, and nuclear submarines. And, increasingly, many of the acquisitions now are for complex services. These myriad acquisitions are managed by DoD's acquisition workforce. This acquisition workforce is composed of not only contracting and procurement specialists, but also of all the employees that form the total acquisition team—from those that help develop requirements, to those that manage programs, and, oversee contractor performance.

DoD, however, has experienced chronic shortages of suitably skilled acquisition personnel as spending and contract actions have increased substantially since 9/11/2001.² The root cause of the current shortages found within the DoD acquisition workforce can be traced to the end of the Cold War, when the United States was left with an excess capacity, of both industrial production and civilian/military personnel. In response, the government took measures to downsize both the defense industry, as well as the defense acquisition workforce during the 1990's. With the changing threat environment, and increased operational requirements of the post 9/11 world, a significant mismatch between the demands placed on the acquisition workforce, and the personnel and skills available within that workforce to meet those demands, quickly developed. This is shown clearly by the data in Figure 1.

² Examples of historical studies undertaken in the 1950's which highlighted such technical and acquisition workforce shortfalls include the Cordiner Committee study of the entire defense establishment and the Ridenour and Stever Committee studies of Air Force Research and Development. More recently, well known reports that cite such deficiencies include the Packard Commission report from 1986 and the Report of the Acquisition Advisory Panel from 2007.

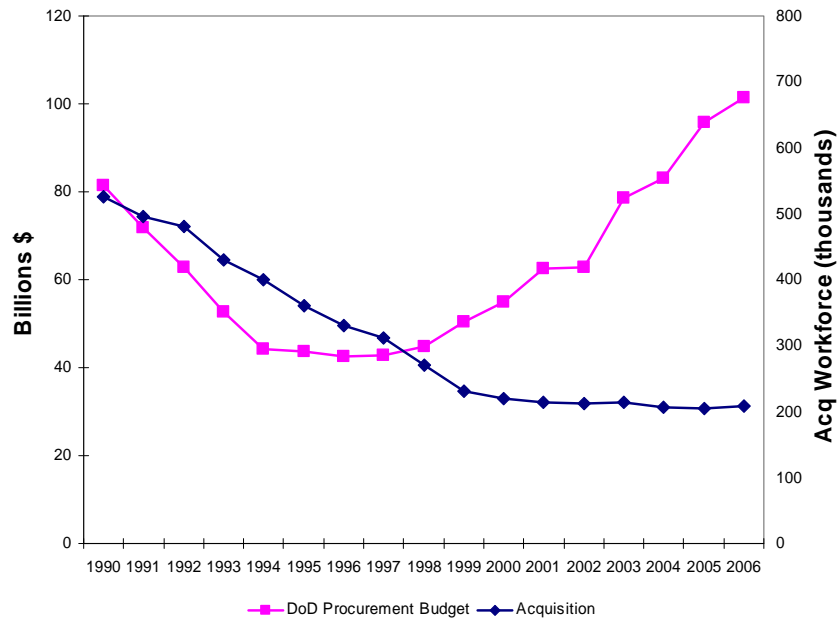


Figure 1. Decline in Acquisition Workforce and Increased Defense Spending (Commission on Army Acquisition and Program Management in Expeditionary Operations, 2007)

One solution adopted by the DoD to augment the declining organic capacities was to hire contractors to support the acquisition functions, creating an increased dependence on contractor support. This produced yet another set of challenges for the acquisition workforce; how best to manage a blended workforce and the new partnering relationships.

In its current state, DoD's acquisition workforce is not optimally structured to meet the nation's twenty-first century security challenges. As DoD seeks to rebuild its acquisition workforce (performing the inherently-governmental functions e.g. contracting, management, oversight, budgeting etc.), it faces several barriers that include difficulties in recruiting and retaining new employees, the wave of retiring workers, significant gaps in existing employee experience and credentials, along with the added challenges of management in a "blended" workforce environment. These barriers have created major roadblocks for senior DoD leadership, as they work to develop an acquisition workforce that meets twenty-first century requirements.

Roadmap.

This report will examine the state of the acquisition environment, detail requirements for the acquisition workforce, note challenges to modernization, and make definitive recommendations for meeting these challenges. More specifically, Section Two will examine the state of the acquisition environment in the twenty-first century, and include a discussion of the impacts on acquisition due to rapidly changing technology, supporting current military operations, severe budgetary pressures, and legislative and regulatory changes. Section Three of this report will briefly examine each component of the acquisition workforce, including: politically appointed personnel; military personnel; and, civilian personnel. Section Four will highlight desired characteristics we believe are necessary for the acquisition workforce to possess in order to become “smart buyers” for the twenty-first century. Section Five will review the challenges likely faced during the course of acquisition workforce modernization. Section Six will provide a series of recommendations we believe will assist DoD in effectively modernizing its acquisition workforce. Finally, Section Seven will provide concluding remarks.

II. Acquisition Environment for the Twenty-First Century.

Of all the changes that have taken place, the one with the greatest influence on the acquisition environment in the twenty-first century is the reorientation of the international security environment. In the 20 years since the Berlin Wall fell, the monolithic threat posed by the Soviet Union has been replaced by distributed and complex threats that have proved far more difficult to satisfactorily address. These threats include those arising from failed and failing states (which have resulted in civil wars, regional instability and humanitarian catastrophes), the growing proliferation of weapons of mass destruction; and expanding threats from global terrorist organizations. This volatile international security environment makes it difficult to project, with any level of confidence, the precise threats that the nation may face even five years from now.

As a result, the current environment is highly unpredictable. Future operations may include activity against global terrorist networks; preparations for potential peer or near-peer competitors, such as China, India, or Russia; missions related to maintaining security against weapons of mass destruction (WMD), including the pursuit of rogue nuclear states such as North Korea and Iran; and, finally, non-traditional national security challenges such as global pandemics, pirates in critical sea-lanes, natural disasters or energy security dilemmas which could require DoD intervention. In response, DoD has shifted from threat-based planning to an alternative approach centered on capability-based planning. Capability-based planning is believed to provide a more rational basis for making decisions on future acquisitions—making planning more responsive to uncertainty. The impact of these changes on the acquisition workforce has been significant, demanding new skills and additional personnel as the workforce must function in an environment with rapidly changing technology, a wide array of new military operations, considerable budgetary pressure, and many legislative and regulatory changes. These factors will be discussed briefly in the following pages.

Rapidly Changing Technology.

In 1965, Gordon Moore had observed that the complexity of semiconductor components had doubled each year since the first prototype microchip was produced in 1959, and projected that the number of components per integrated circuit would continue to double approximately every two years. Over forty years later, despite skepticism that this trend would continue, the transistor counts exceed a few hundred million for logic chips, and even more for memory chips. Some have used Moore's Law to describe the exponential growth of technology in general. In addition, the controlling and embedded software for these technologies continue to evolve on 12-18 month cycles, demanding a much more technically competent acquisition workforce than ever before. This trend of accelerating technological change will continue to have a critical impact on warfighting and weapon systems, as the military develops applications based on these new developments, including: advanced information technologies, quantum computing, nano-technologies, bio-technologies, and robotics. The acquisition workforce will be tasked with maintaining the agility to acquire a wide variety of systems capitalizing on these technologies.

Further, in an effort to leverage the advances of the information revolution, DoD adopted a doctrine of "net-centric warfare." The goal was to use extensive systems networking from widely-distributed "sensors to shooters," creating shared situational awareness and thereby enabling collaboration and improved speed of command. This networking led to the need for greater and greater integration and interoperability, in the form of "system of systems" (SoS) development. These systems-of-systems included individual weapon systems that have been bundled together as part of a larger, over-arching system architecture—creating a capability, which when combined, is greater than that of each individual component. The impact of these advancements on the requirements placed on the acquisition workforce is significant, as DoD must now place a premium on those workforce members with the advanced technical skills to develop these complex SoS.

Supporting Current Military Operations.

In addition to technology changes, DoD continues to support high-operations-tempo military operations globally. Current operations in Iraq and Afghanistan demonstrate the challenges American forces face while undertaking multiple military operations simultaneously. These operations require significant numbers of contractor personnel to provide various types of in-theater support. For example, in 2007 there were about 270,000 contractors in the Iraq/Afghanistan theaters (more than 50 percent of the total force) (Commission on Army Acquisition and Program Management in Expeditionary Operations 2007). The expanded use of contractors for these operations creates additional management responsibilities for DoD's acquisition workforce, since they must oversee the performance of numerous contracts in the contingency environment.

In addition, the different climate and terrain profiles of Iraq and Afghanistan highlight how the military must be prepared to operate in a variety of different environments—each of which will require their own unique types of support from the acquisition community. To this end, current operations in Iraq, which are primarily urban in nature, require a very different force structure and operational capability than missions in Afghanistan, which are being conducted in rugged, mountainous terrain and extreme weather conditions. Besides operations in Iraq and Afghanistan, we believe future operations will also be incredibly diverse, as exemplified by recent U.S. military involvement with humanitarian operations in Haiti.

As a result of these wide-ranging missions and operations, DoD's acquisition environment has become significantly more complex. For the acquisition workforce, this complexity means that there is now a high demand for individuals with a diverse set of skills and experience (such as experience with traditional military operations, as well as reconstruction, and humanitarian efforts) to support the wide array of potential military operations likely to be faced by U.S. forces in the future. The differences in these types of missions cannot be ignored, as the types of goods and services being acquired may

vary greatly. Consequently, the workforce must have the appropriate competencies to successfully meet DoD's evolving operational requirements.

Severe Budgetary Pressures.

An additional complicating factor in today's acquisition environment is the likely near-term projection of severe budgetary pressures. The United States faces several long-term budgetary challenges. The rapidly-increasing financial burden as "Baby Boomers" age (by 2020 the number of people in the U.S. population between the ages of 65-84 is expected to rise by nearly 50 percent) includes mandatory federal entitlement spending on programs such as Social Security and Medicare, as well as the impact of the recent healthcare reform bill. For example, during the next eight years, annual growth rates for Social Security and Medicare/Medicaid are expected to rise by roughly 4.5 to 6.5 percent, and 7 to 8 percent respectively (Congressional Budget Office, 2007). Spending on these programs is directly tied to rising cost-of-living and healthcare costs in the United States; and, has historically outpaced defense spending as a percent of GDP. Compounding this budgetary problem will be the payments on the national debt, accumulated during the economic collapse of the past decade. These challenges, and the impact they will have on the domestic economy, will directly influence DoD's future budgets.

Additionally, the DoD has come to rely on large wartime "supplemental" budgets; which will likely be eliminated or, at a minimum, significantly reduced in years to come. Finally, a sizable portion of "defense discretionary" spending is not available, since it is already earmarked for future requirements, including the rising costs of compensation for military personnel, military health care, and facility modernization programs (Defense Science Board, 2005).

When combined, these pressures place an immense burden on the workforce to overcome the gaps that will likely exist between available funding and DoD's twenty-first century operational requirements, and will create an inevitable downward pressure on future DoD budgets. This will serve to limit the funds available for recapitalization, modernization, and transformation of the military; imposing severe fiscal constraints on the acquisition

environment. The potential severity of these pressures has been widely noted, with special attention being paid to the discrepancy between DoD requirements and available funding—an issue that could become one of the single largest problems faced by the Department in years to come (Gates 2010). This will place a premium on knowledge in areas such as business management and best-value decision-making, within the ranks of the acquisition workforce, to mitigate the impact of these budgetary pressures.

Legislative and Regulatory Changes.

Acquisition within DoD has evolved over time as numerous legislative and regulatory changes have impacted DoD as an organization, its workforce, and its processes for the acquisition of goods and services. Below, we highlight some of the most important legislative and regulatory changes influencing the current state of the acquisition environment.

Goldwater-Nichols Department of Defense Reorganization Act of 1986.

A significant legislative change impacting DoD personnel and the acquisition workforce was the Goldwater-Nichols Department of Defense Reorganization Act of 1986, commonly referred to as the Goldwater-Nichols Act. This act was responsible for the reorganization of the Defense Department, creating a new emphasis on joint operations. Moreover, the Act created the new position of Vice Chairman of the Joint Chiefs of Staff (VCJCS), who acts as the Chairman, when the Chairman is absent. Moreover, the VCJCS plays a significant role in the acquisition process, as the Chairman of the Joint Requirements Oversight Council (JROC), and as the Vice Chairman of the Defense Acquisition Board. The motivation behind the passing of Goldwater-Nichols was to combat the decades of inter-service rivalry that had plagued DoD for some time (Locher, 2002). As related to the acquisition workforce, Goldwater-Nichols assigned full responsibility for all acquisition activities to the Under Secretary of Defense for Acquisition and altered the roles and responsibilities of those military members of the acquisition workforce that require political appointments, while paving the way for joint acquisition programs.

Defense Acquisition Workforce Improvement Act (DAWIA).

Perhaps considered to be the most significant legislative change impacting the education and training of DoD's acquisition personnel, the Defense Acquisition Workforce Improvement Act, or DAWIA, was passed in 1990 and required the DoD to establish education and training standards, requirements, and courses for the civilian and military acquisition workforce. This measure was primarily enacted due to several reviews (including the Packard Commission) that highlighted deficiencies in the technical skills and training of the acquisition workforce. The Act also created certification standards, at three levels, for each of the thirteen acquisition career fields (Defense Acquisition University 2009).

The introduction of DAWIA has had a significant impact on DoD's acquisition personnel, as they are now required to participate in a structured educational program in order to achieve career advancement. One of the noted drawbacks, however, of such an approach is the potential that it may limit the ability for employees to diversify their experiences; since the requirements for advancement are stringent and include specific service requirements for working in a particular job field. These restrictions make it difficult for employees to cross-train and to gain experience beyond a lone core-competency.

Federal Acquisition Streamlining Act (FASA).

Passed in 1994, FASA served as a major turning point in acquisition legislation that now formally required the Secretary of Defense to approve or define the cost, performance, and schedule goals for major defense acquisition programs of the Department of Defense and for each phase of the acquisition cycle of such programs. Furthermore FASA mandated that some 90 percent of those goals must be met. One example of performance requirements of the legislation was the establishment of pilot acquisition programs for the purposes of evaluating changes in the way the acquisition of new goods and services are undertaken. Examples of successful performance-based acquisition programs include joint direct-attack munitions (JDAM), commercially-derived aircraft and engines, and a fire-support tactical trainer (Grasso, 2000).

Such changes in policy were based on a desire by DoD to decrease costs for doing business through the expanded use of commercial practices and a reduction in the existing bureaucracy. Specific requirements of the legislation included: a move to increase the use of commercial-off-the-shelf products (COTS); streamlined processes for making COTS purchases; raising the threshold for numerous defense procurement statutes to \$100,000; streamlining the bid-protest process; raising the cap for specialized accounting requirements to \$500,000; raising the cap to \$100,000 for contracts that could be reserved for small businesses; and the creation of unified procurement statutes for executive branch agencies (Grasso, 2000).

As a result of FASA, a new focus on cost, schedule, and performance requires acquisition personnel to possess additional business, accounting and economic skills. Furthermore, the acquisition workforce must realign its attention to identifying commercial best practices; a feat that can be difficult for those workforce members with little or no experience in the private sector.

Federal Acquisition Reform Act.

Following the Federal Acquisition Streamlining Act, an effort to add additional reforms was undertaken with the Federal Acquisition Reform Act (FARA) which sought to improve competition for commercial products, while preserving “full and open” competition, and reduce barriers to the acquisition of commercial goods. Additionally, the Act further streamlined bid-protest processes, by allowing the GAO to serve as the mediating party. In anticipation of the success of such reforms, on efforts to streamline acquisition functions, the Act further reduced DoD’s acquisition workforce by 15,000 while advising DoD to seek additional reductions in the near future³ (Grasso, 2000).

The introduction of the Federal Acquisition Reform Act placed additional burdens on the acquisition workforce, due to decreases in manpower and capabilities; resulting in the potential that some important personnel resources would no longer be available. As was later experienced, immediately following 9/11 and during the military operations in Iraq

³ Additional workforce reductions were included as requirements in several subsequent Defense Authorization Acts.

and Afghanistan, the impact of these personnel reductions became significant as contracting actions and dollars spent increased significantly, without a commensurate increase in the acquisition workforce.

Performance-based contracting requirements.

Performance-based services acquisition (PBSA) is the use of performance-based contracting for the acquisition of services, and has recently been the focal point of several initiatives to improve the quality of professional services provided to the DoD. One such initiative was the DoD's Undersecretary of Acquisition, Technology and Logistics' memo on Performance Based Service Acquisition from April 5, 2000. This memo required DoD to establish, at a minimum, by 2005, that 50 percent of all contracting dollars spent and actions for service contracts were to be performance-based (Undersecretary of Defense for Acquisition, Technology & Logistics, 2000).

PBSA "involves acquisition strategies, methods, and techniques that describe and communicate measurable outcomes, rather than to direct compliance with performance processes." PBSA is a method for acquiring *what is required*, and placing the responsibility for *how it is accomplished* on the contractor (The Office of the Deputy Under Secretary of Defense (Acquisition Reform), 2000). The purpose of PBSA is for the government to adopt best commercial contracting practices, so as to take advantage of the enormous private market potential to deliver superior performance at a low cost (Gansler, 2010). This reform effort has impacted the types of skills that must be held by acquisition employees. For the effective implementation of PBSA, acquisition workforce personnel must now be more familiar with performance-based metrics, requirements planning, and effective oversight and monitoring techniques for evaluating contractor performance—in order to ensure performance targets and contractual requirements are met.

Weapon Systems Acquisition Reform Act of 2009.

The Weapon Systems Acquisition Reform Act of 2009 was passed for the purpose of reforming acquisitions of expensive, highly-technical systems-of-systems, and has

significant implications for the roles and responsibilities of the acquisition workforce, moving forward. The Act seeks to promote early-stage systems engineering analysis, during the development cycle, by the Services themselves (currently, in some cases this analysis is being conducted by contractors). Furthermore, the Act sets strict guidelines for terminating programs that run 25 percent over budget, or greater (unless a national security exception can be made). The reform measure also creates additional senior-level positions within DoD's acquisition workforce; including the Director of Independent Cost Assessment and the Director of Developmental Test and Evaluation. Lastly, the Act specifically requires that the Secretary of Defense take measures to ensure that "trade-offs between cost, schedule, and performance are considered as part of the process for developing requirements for major weapon systems" (Benson, 2009). The implications of the reforms presented in this Act are significant for the acquisition workforce, as they highlight the new focus within the Department on ensuring best-value decisions are made, while stipulating an additional in-house requirement for monitoring research and development progress. Such reforms will also demand increased levels of technical competency from members of the acquisition workforce.

Impacts on DoD Acquisition.

These changes have all impacted the nature of DoD acquisition. DoD is now buying more services than hardware; there has been a rise of "contractor augmentation,"⁴ later followed by an "in-sourcing" initiative; a greater focus on contingency contracting; and, the emergence of rapid response and streamlined acquisition processes.

DoD buying more services than hardware.

⁴ For the purposes of this report "contractor augmentation" will be defined as those contractors that were hired to provide support services to the acquisition workforce following downsizing during the 1990's and 2000's.

Due to changing technological and operational requirements, and decisions to outsource many support services (such as many logistics support functions), DoD has shifted a majority of its purchases from goods to services. Historically, the acquisition of goods had served as the major function of the acquisition workforce. Recently however, not only have services composed a greater proportion of DoD's spending overall, but spending on services has continued to increase. In FY2005 for example, DoD obligated more than \$141 B on service contracts – a 72 percent increase from FY1999 (Acquisition Advisory Panel, 2007). Spending on services continued to steadily increase as DoD spent roughly \$201.88 B in FY2008, (a little more than half of all its spending on goods and services.). Not only has DoD increased its spending on services consistently over the past decade, but spending on services has also consistently outpaced spending on goods during this period as well.

The growth of service contracts in recent years can be partially traced to increased support requirements following 9/11, in addition to the deployment of military personnel to Iraq and Afghanistan. As a result of military downsizing after the Cold War, many logistics support functions (which had been previously accomplished by DoD personnel) are now provided by contractors. For example in 2009, estimated support contractors in Iraq and Afghanistan were numbered at over 240,000, with about 80 percent of them being foreign nationals. Further, as of June 2009 some 1,360 of these support contractors have died in the war zones (Commission on Wartime Contracting in Iraq and Afghanistan, 2009).

Another contributing factor to the increase in services is DoD's shift from buying goods for the in-house provision of a function by the military or DoD civilians, to a model, focused on purchasing the requisite the service from a contractor instead. In addition to being cost effective, this approach also provides added flexibility, because operations and maintenance funding can be used, as opposed to procurement funding. One example of this phenomenon is the Evolved Expendable Launch vehicle program; where the Air Force has the ability to purchase rocket launch services from private contractors, instead of seeking to purchase rockets and manage launches themselves. This shift has moved the purchase of capabilities like this from being classified as "goods purchases" to

“service purchases.” Another example of this practice is the purchase of simulator training services (being done because of the difficulties in modernizing existing simulator hardware and software for both the Army and Air Force). In this case, instead of purchasing the simulators themselves, the two branches now purchase training services from outside providers (Hutton, 2007).

The impact of the increase in service contracts for the acquisition workforce is significant, as service contracts are often more complex than those for goods. Due to this added complexity, DoD’s acquisition workforce is now required to have very different skill-sets and a wider knowledge-base to draw from. For example, because service contracts have different types of deliverables than do contracts for goods, acquisition personnel must have an understanding of how these contracts function, how they should be managed, and service-specific information for the type and quantity of services being acquired. Major differences in the acquisition of services from goods include the need for performance accountability, accurate estimates of level of efforts versus volume of materials, as well as intangible issues that may arise when dealing with people and contractual or legal matters that vary significantly between purchases of goods and services (such as the type of language that is used in the contract to describe the service being purchased). Further, the importance of acquiring services competitively (and ensuring the workforce has the requisite skills to do so) cannot be stressed enough. Moving forward, the Department has undertaken several initiatives to increase the levels of competition, and it will be dependent upon the skills of its workforce to effectively manage these contract awards--to ensure that the rewards of competitive acquisitions can be harnessed.

The added complexity of acquiring services, within the context of a downsized workforce, has created an environment where acquisition personnel are often struggling to meet the needs of the twenty-first century. To paraphrase recent testimony by John Hutton on the matter: recently, it has become incredibly difficult for DoD to maintain a workforce with the required knowledge of market conditions, industry trends, and the technical information about the services they procure; the ability to prepare clear

statements of work; and the capacity to manage and supervise an increasing number of contractors (Hutton, 2007).

”Contractor Augmentation.”

Following the downsizing of the acquisition workforce, new acquisition requirements emerged that stretched DoD’s capacity. The added pressure of increased operational requirements, along with spending and contract actions increases, resulted in a major push toward contractor augmentation for the acquisition workforce. By using contractors to augment the acquisition workforce, DoD was able to obtain the required services. The impact, however, of acquiring these services from contractors includes the appearance and possibility (if not carefully controlled) of contractors performing “inherently governmental” functions; as well the potential for conflicts-of-interest.

While the acquisition workforce has been able to use contractors to provide some additional support, the execution of several functions which have, in some cases, come close to “inherently governmental,” and have led many inside and outside of DoD to question whether the benefit of using contractors, outweighs the potential risks. For example, in some cases, these contractors have been tasked with preparing statements of work, managing acquisition plans, and even drawing up contracting documents; because DoD’s previous capacity reductions, in some cases made the performance of such functions with in-house resources difficult (Brodsky, 2008). Thus, real concern has emerged, in instances where contractors have been hired to support government acquisition personnel without proper management and oversight, of how they are performing and what tasks they may be undertaking (Kaplan 2008).

“In-sourcing.”

Recently, there also has been a push—primarily initiated by the new Presidential administration—to bring many “contractor augmented” support services back in-house, using Federal employees, through so-called “in-sourcing.”⁵ The logic behind such a

⁵ For the FY2011 budget, Defense Secretary Robert Gates is seeking a \$79 million hike in civilian pay and benefits for the Office of the Secretary of Defense, including “\$42.6 million from internal in-sourcing actions that generate projected savings of \$26 million” (Inside Defense 2010).

movement is that reducing the dependence on contractors to perform acquisition-related functions would have government employees performing “inherently governmental” functions, reduce conflicts of interest, and (they believe) also reduce the costs of performing these functions, since government employees generally earn less than contractors (although the total cost of government civilians is generally widely underestimated—as numerous studies e.g. by GAO, CBO, etc. have shown). Moreover, there is the belief that DoD civilians would provide better oversight, helping to ensure that contractors properly fulfill their contractual obligations.

To initially fulfill this “in-sourcing” initiative, DoD will convert roughly 11,000 contractor support positions back into DoD civilian employee positions, as part of a larger strategy to expand its acquisition workforce by 15 percent, or 20,000 employees, through fiscal year 2015. Further, it is believed such a strategy will contribute to effectively providing oversight against fraud, waste, and abuse that has significantly appeared to have increased in contracting in the war-zone;, in-part, due to a belief in a lack of government management and oversight (Assad, 2009).

The positive impact of “in-sourcing” on the acquisition workforce could be significant if “in-sourcing” is undertaken in a strategic manner, for the purposes of reducing the recognized shortages within the acquisition workforce; and if it is achieved with employees with the needed skills and for “inherently governmental” positions. However, if “in-sourcing” is viewed as strictly a requirement to meet numerical goals, and care isn’t taken to hire the best-qualified individuals with the required skills, the potential benefits of “in-sourcing” will be significantly reduced and are likely to actually be negative (in both performance and costs).

Contingency contracting.

Another impact of changing military operational requirements in the modern acquisition environment is the high demand for contingency contracting, which places an additional

burden on the acquisition workforce. Contingency contracting can be defined as those contracting efforts that are required as the result of military operations, and demand contracting support in-theater, usually overseas, and often within close proximity to the war-zone itself.

Today's contingency contracting is unlike anything that was undertaken in previous military operations, particularly as a result of the downsizing of the military's service support units during the 1990's; in addition to the unpredictable nature of these conflicts (including unknown timelines and difficulty of post-conflict reconstruction efforts). The military has, as a result, turned to the private sector for the "surge" provision of major support services for its troops in-theater, requiring a major presence of acquisition professionals to oversee and manage these services (Carafano, 2009).

As explained by the Commission on Army Acquisition and Program Management in Expeditionary Operations (commonly known as the Gansler Commission), warfare in the future is likely to be expeditionary and likely to involve high numbers of contractor personnel. The Commission noted that the military has currently been stretched thin, and, as a result, has widely used contractors for the provision of support services. Despite these changes, the necessary oversight and management of contractor activities must be maintained within the expeditionary contracting environment, and that requires DoD contracting personnel on-site (Commission on Army Acquisition and Program Management in Expeditionary Operations, 2007).

As further noted by the Gansler Commission, in 2007 over half of the personnel in Iraq and Afghanistan were contract employees. This puts enormous pressure upon Army acquisition personnel and, specifically, those members in the contracting field who participate in writing, negotiating, monitoring, and maintaining accountability for the contracts (Commission on Army Acquisition and Program Management in Expeditionary Operations, 2007).

Because of the rise of service contracts and the needed focus on contingency contracting, DoD contingency contracting personnel are required in-theater, for the purpose of managing support contracts. An added complication is the fact that DoD is prohibited

from *requiring* government civilian personnel to serve in these war-zone positions; and, consequently, must ask for volunteers. This often results in a shortage of qualified individuals willing to accept the risks required for doing their current job in a hostile military environment. As a consequence, those members of the acquisition workforce who do choose to volunteer are often overworked and turnover rates can be incredibly high, only further negatively impacting acquisition outcomes in-theater.

In addition to the obvious physical risks and additional pressures endured by acquisition personnel, contingency contracting efforts directly impact the acquisition workforce as these situations may demand special skills that are not required when contracting personnel are performing their duties under normal circumstances. For example, in a contingency environment, besides the need for expedited treatment, much of the work may be paper-based, as access to information technology is often limited. In this case, personnel may have to creatively devise methods for oversight and management of contractor performance which are relatively different from traditional contractor management and oversight processes⁶.

Streamlined/rapid response acquisition.

A final impact of the current environment is the increased demand for the acquisition workforce to perform streamlined or rapid acquisitions, to help military forces respond to rapidly-evolving asymmetric threats. This approach is designed to move outside of the traditional acquisition process to one that is designed specifically for the purposes of creating immediate solutions to warfighter problems and has thus far yielded mixed results. The requirements, known as Immediate Warfighter Needs (IWNs), are ones which have been a center of attention for streamlined acquisition efforts. An IWN is defined as an Urgent Operational Need (UON) that must be addressed within 120 days or less, and, if left unfulfilled, could result in loss of life or prevent the successful completion of a near-term military mission. Rapid acquisition for the purposes of supporting a UON or IWN is very different from the traditional acquisition process as it

⁶ In response to the Gansler Commission report, the Army established (in 2009) the Army Contracting Command, with an Expeditionary component. This action is intended to specifically address the problems described above.

has been streamlined to increase efficiency (Joint Rapid Acquisition Cell, 2006-2007). Improvised explosive devices (IEDs) serve as a prime example of a major IWN that has been addressed using streamlined acquisition.

Streamlined, or rapid-response, acquisition places additional cost, schedule, and performance accountability burdens upon acquisition personnel; and, in some cases increases their powers of authority for the purposes of reducing bureaucratic red tape. Members of the acquisition workforce, participating in a streamlined, or rapid-response acquisition effort, must be highly competent and aware of the impact of their decisions, which, if made incorrectly, may directly contribute to loss of life or mission failure.

In the case of the DoD's effort to quickly acquire vehicles that would be resistant to IED's, a rapid acquisition effort was undertaken to procure Mine Resistant Ambush Protected (MRAP) vehicles. The MRAP program began in February 2007, using a tailored acquisition approach to rapidly acquire and field the vehicles. An aggressive production schedule began in February 2007, with one vendor producing 10 vehicles. By March 2008, just over a year after the initial contracts were awarded, 6,935 vehicles had been produced (Sullivan, 2009).

To date, the MRAP has been credited with saving countless lives and contributing directly to an alteration in tactics by insurgents. As the MRAPs are capable of withstanding many types of IED's, insurgents have been less successful in taking American lives. As of 2008, IED attacks accounted for some 40 percent of all attacks on Coalition forces in Iraq; however, this number is significantly lower than previous levels and has continued to fall. For example, the overall number of IED incidents in September 2008 was about 33 percent of the total from September 2007, and only 22 percent of the total number of incidents from September 2006—a sure sign of improvement (Joint Improvised Explosive Device Defeat Organization, 2009). The MRAP example highlights the power that acquisition personnel have during streamlined acquisition or rapid acquisition processes and their potential positive impacts on the warfighters. In the case of MRAP, the use of proven technologies, minimized requirements, and multiple suppliers, have all contributed to the program's success. To

date, numerous American lives have been saved due to the speed at which the MRAP was developed and delivered to the warfighter (Sullivan, 2009).

III. Defense Acquisition Workforce.

Background.

The DoD's government acquisition workforce is composed of three different groups. The first group includes senior political appointees, the second group includes military acquisition personnel (both officers and enlisted members), and the third group is composed of DoD's civilian acquisition workforce. Each of these groups serve a distinctive purpose, has different roles and responsibilities; and is often required to function in tandem with the others as part of achieving the required DoD acquisition missions. Accounting for the precise numbers of these groups, however, can be somewhat difficult. While political appointees are fairly easy to tabulate, military and civilian members become much more difficult, as definitions vary widely on exactly who is a member of the acquisition workforce.

Within DoD, there are two methods used for counting DoD's acquisition workforce. The first, known as the "Acquisition Organization Counting Method" tabulates the acquisition workforce by adding up each of the 22 designated DoD acquisition organizations, irrespective of the particular occupation of the individual employee that is part of that organization (Department of Defense, 2006). The second method is known as the "Refined Packard Method," and combines both information related to the acquisition organizations as well as the job functions of employees within those organizations (Department of Defense, 2006). In some cases, various refinements or alterations to these methods are also used to report acquisition workforce statistics. For example, the Defense Acquisition Workforce Improvement Act provided a very narrow counting method that was primarily used for supporting career development, but not necessarily ideal for overall workforce planning.

Outside of DoD, the Federal Acquisition Institute (FAI) uses a much different methodology for tabulating acquisition workforce statistics, rooted in guidance from the

Office of Management and Budget (OMB). This method only tabulates those employees who are members of a few specific GS occupational series; e.g. occupational series such as General Business and Industry (GS-1101), Contract Specialist (GS-1102), Purchasing (GS-1105), Procurement Cleric and Assistance (GS-1106) and key acquisition roles such as Program/Project Managers and Contracting Officer Technical Representatives (COTRs)⁷ (Federal Acquisition Institute, 2009).

While, on the surface, such differences in definitions may not appear to be particularly problematic, in reality these varied counting methods produce widely different estimates of the acquisition workforce, that can make planning and efforts to modernize more difficult. For example, using the data provided by FAI, DoD's acquisition workforce in FY2008 consisted of just 43,063 personnel (Federal Acquisition Institute, 2009). By comparison in FY2004 the "Acquisition Organization Counting Method" and the "Refined Packard Method" counted 206,653 and 134,602 respectively. The impact of these differences can be significant, as varying definitions of the acquisition workforce can contribute to ineffective manpower planning and de-rail workforce modernization efforts. To understand the acquisition workforce better we will now examine each member group in greater detail, beginning with senior political appointees.

Senior Political Appointees.

Presently, there are 54 civilian politically-appointed positions within DoD; with 32 in the Office of the Secretary of Defense (OSD), 8 in the Office of the Secretary of the Army, 7 in the Office of the Secretary of the Navy, and 7 in the Office of the Secretary of the Air Force. In addition to the Secretary, particularly important senior members of the acquisition workforce within OSD include the Under Secretary of Defense for Acquisition, Technology & Logistics (USD AT&L); the Principal Deputy Under Secretary of Defense for AT&L; the Assistant Secretary of Defense for Logistics and Materiel Readiness; Assistant Secretary of Defense for Acquisition; Director of Defense Research and Engineering; Director, Operational Energy Plans and Programs; and

⁷ Interestingly, however, only COTRs in civilian agencies are counted by the Federal Acquisition Institute (Federal Acquisition Institute 2009).

Assistant to the Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs. Within each of the services the key acquisition positions include the Assistant Secretary of the Army for Acquisition, Logistics, and Technology; within the Navy, the Assistant Secretary of the Navy for Research, Development and Acquisition; and within the Air Force, the Assistant Secretary of the Air Force for Acquisition (Center for Strategic and International Studies, 2010).

The roles filled by these senior political appointees is critical, not only for the functioning of all the acquisition organizations within the DoD, but also for the purposes of ensuring continuity of organizational missions and fulfillment of policy objectives. In recent years, the confirmation process and qualifications necessary for political appointments, in addition to increasingly-restrictive post-service limitations have proven to be difficult impediments to recruiting and fulfilling staffing requirements for these highly important positions.

Tenure and Confirmation Process.

Government agencies are led by political appointees, and, there is often a high degree of leadership turnover. As of 2009, the average tenure of Senate-confirmed appointees is only 3.3 years, and only 2.8 years for appointees that serve at executive departments (Breul 2009). The average tenure of politically-appointed senior officials also tends to vary between government agencies. For example, the turnover rate at DoD is much higher. From 1949 through 1999, the average tenure of Secretary of Defense and Deputy Secretary of Defense were 30 months and 23 months respectively; and among other senior DoD officials, the most common tenure was between 11 and 20 months (Marcum, 2001).

An additional problem with political appointees is the significant lag time between a candidate's nomination and Senate confirmation. The Senate confirmation process of political appointees takes an average of 8.5 months—this is more than triple the time needed thirty years ago (Marcum, 2001). This delay is caused, in some part, by the

increased scrutiny that Congress places on candidates, which has resulted in a more extensive vetting process by administrations.

Due to the longer time required for Senate confirmations, and the higher turnover, the vacancy rates for political appointee positions have increased. For example, at DoD, political appointee positions are vacant approximately 20 percent of the time (Marcum, 2001). This problem is highlighted by the current Administration's difficulty in nominating qualified top-level political appointees that require Senate confirmation. As of April 2010 (17 months after the election in Nov. 2008), 41 appointees (for DoD's approximately 54 available positions) had been confirmed by the Senate. Of the key acquisition positions within OSD, more than half were still awaiting confirmation one year after the President's inauguration (Center for Strategic and International Studies, 2010).

Finally, the use of Senate "holds" on political appointments serves as a major barrier to quickly navigating the confirmation process. In many cases, "holds" are placed on political appointments by members of the Senate for political reasons, or to create a bargaining chip to leverage Federal funding for the member's state—both factors that are independent of an appointee's professional competencies or personal character.

Qualifications.

An additional factor directly related to the confirmation process, is the matter of appointee credentials. In some cases, candidates are presented who may not necessarily meet the pre-requisites, as envisioned by Department leadership or Congress; but, due to extenuating circumstances (or perhaps political considerations), these individuals are submitted as suitable candidates for extremely-important acquisition positions. For example, the recent nomination of Ashton Carter, as Under Secretary of Acquisition, Technology & Logistics, raised eyebrows among some because of a statutory requirement that the nominee for this position have experience as a senior executive within the defense industry—not an unrealistic expectation for a position that is the focus of DoD acquisition. As a consequence, a waiver to this requirement would have to be granted unless it can be successfully argued that the candidate did fulfill the requirement

in his/her career (Bender, 2009). The impact of permitting waivers to background or experience requirements is significant, as it undermines the value of establishing guidelines for high-level acquisition positions. Critics of the industry acquisition experience requirement believe that such ties promote the potential for conflicts of interest and favoritism, in the event that high-level Department officials have previous relationships with the defense industry. Proponents, alternatively, believe that because of the complex nature of defense acquisition, and the potential impact of monopsonist government actions on the industry, such experience is essential.

As a result of these considerations, it is possible that the selection process is negatively impacting the quality of the workforce serving at the highest appointed levels within the Department. Consequently, some of these senior positions may be held by those who:

1. Could be confirmed (either for political reasons or otherwise, such as not having any existing conflict of interest issues);
2. Were willing to adhere to the various restrictions required of senior level political appointees (such as restrictions on whom they may contact or work for after their appointments end);
3. Could financially afford a significant pay cut from the prospect of a similar position in the private sector; and,
4. Had a background that was minimally acceptable for the position or were able to secure a waiver to eliminate certain experience requirements.

Impacts on the State of the Acquisition Workforce.

The impact of short tenure, the confirmation process, and qualification requirements on the state of the acquisition workforce is considerable. First, these factors contribute to a very high turnover rate, within DoD, for senior level acquisition positions. High levels of turnover can be attributed to the general frustration some acquisition workforce members have with navigating DoD's internal bureaucracy. Furthermore, upon entrance into high level DoD acquisition positions, many higher-paying private sector employment

opportunities often emerge that draw these members out of the public sector. Second, while the confirmation process is designed to allow Congress to provide its “advice and consent” of administration nominees, the prospect of going through the prolonged process can lead some nominees to resist accepting the potential nomination altogether. Third, the ethics restrictions that are required of nominees are more stringent now than ever before, which make many potential nominees hesitant to agree. For example, President Obama’s first Executive Order issued upon entering office was the creation of a highly-controversial “ethics pledge”, which required all existing political appointees (and future nominees) to sign. The most troubling condition of the “ethics pledge” is a series of revolving-door bans restricting an appointee’s employment activities for a period of two years after he/she leaves office. Fourth, it is widely agreed upon that pay and benefits for senior political appointee positions within DoD are considerably less, when compared to positions with similar responsibilities in the private sector—in most cases these private sector positions pay several times what DoD can offer in salary. This fact directly impacts a nominee’s decision to be considered, since they must be in a financial position to take a significant cut in pay and benefits. Finally, because it is possible, in some cases, to secure waivers for minimum experience qualification standards, the original intent of statutory requirements demanding certain experience or education standards for appointees can be circumvented.

The sum of all of these impacts is significant, as each directly influences decisions by those members of the potential appointee pool to be considered; and, consequently, degrades the overall quality of potential appointees, as individuals drop out of contention for various reasons. Furthermore, such factors directly contribute to creating excessive delays in making appointments, in addition to high vacancy and turn-over rates. In short, the factors noted above make it difficult to fill positions in a timely manner, and contribute to creating a smaller, and less qualified potential nominee pool, impacting the overall quality of those leaders at the highest levels of the acquisition workforce. Finally, it must also be noted that the resultant shortened tenure, means that it is difficult if not impossible to make significant acquisition process changes that transcend an appointee’s term (since each new appointee has “their” initiatives that they want to push).

Military Acquisition Personnel.

In addition to the role played by DoD's appointed acquisition personnel, military officers and enlisted military acquisition professionals fulfill vital functions for the Department as well. Currently, the number of military acquisition personnel has been significantly reduced (especially at the General Officer level), which we believe has directly contributed to problems with effective management of DoD acquisition programs. Further, within the military, there has been a long-time belief that acquisition and contracting work was a mere administrative function, which ultimately contributed to a general disinterest in these career paths across all services. In some cases, individuals without proper training and/or experience are given acquisition positions (most notably those undertaking contingency contracting responsibilities; and, more recently, those assigned as Contracting Officer's Representatives). Thus we have identified two major factors influencing the state of the acquisition workforce as applied to military personnel as being: 1. the severe decrease in numbers; and, 2. the general lack of well trained or experienced personnel fulfilling some acquisition duties.

Decreasing Numbers.

In 1958 during the Cold War, the three military services had more than 300,000 military officers on active duty. Of this group, a mere 5,500 were assigned to research and development activities and roughly the same number were tasked with fulfilling acquisition and procurement related functions (Peck 1962). By the mid 1980's, military officers were tasked with managing over 90 percent of roughly 240 DoD program offices with ranks ranging from 0-5 (lieutenant colonel/commander) to 0-8 (major general/rear admiral) (President's Blue Ribbon Commission on Defense Management, 1986). At the end of the Cold War, personnel reductions were expanded across all enlisted and officer members of the acquisition workforce. As can be seen from Figure 2 below (among the smaller GAO definition of who is included), between FY1993 and FY1997, the military portion of the acquisition workforce decreased significantly, from roughly 65,000 members in FY1993 to 47,000 in FY1997.



Figure 2. Military Members of the Acquisition Workforce (United States General Accounting Office, 1998).⁸

These reductions continued for an extended period, leaving just 15,820 military officers in acquisition positions by 2004, down from 17,703 in 1999 (United States Department of Defense, 2005).⁹

Consistent with reductions across the enlisted and officer corps, senior officers in acquisition fields over time were also severely reduced from previous Cold War era levels. For example, General Officers in an acquisition field have been reduced significantly in the Army, where, between 1990 and 2007, General Officers with a contracting background were reduced from 5 to 0. Similarly, since 1995 the Air Force reduced its 40 General Officers in acquisition to just 24. And, beginning in 1995, the Defense Contract Management Agency (DCMA) reduced its staff of 4 General Officers in 1990 to none by 2007 (Gansler, 2009a).

The value of having General Officers in these positions cannot be overstated. In a military environment, the number of General Officers associated with a particular field reflects its importance and provides high levels of accountability and professionalism.

⁸ This workforce count was compiled by GAO using data from the Defense Manpower Data Center and data from the Office of the Under Secretary of Defense (Acquisition and Technology) and (Acquisition Reform) and in the military services (United States General Accounting Office, 1998).

⁹ This data was found using Defense Acquisition Workforce Improvement Act (DAWIA) and Defense Manpower Data Center (DMDC) data and verified via the “Refined Packard” counting method which only counts military officers in DAWIA as part of the workforce (United States Department of Defense, 2005).

Furthermore, General Officers in acquisition positions are also vital to ensuring that staffing assignment policies are adhered to, as these personnel will be responsible for populating the necessary military officers and enlisted personnel throughout the chain of command (in addition to the civilians who are also needed to fulfill acquisition functions of critical importance).

Further complicating matters, associated with long-time reductions in military acquisition personnel, is clearly defining the number of military acquisition personnel required—given the current state of the acquisition and operational environments. As contracting actions and spending have increased significantly in recent years—primarily due to Operations Iraqi Freedom and Enduring Freedom—one would assume that the numbers of personnel should increase significantly as well. However, the services, have not necessarily agreed. As noted by the Commission on Army Acquisition and Program Management in Expeditionary Operations (also known as the Gansler Commission), despite the Army having a 600 percent workload increase, only three percent of the Army's contracting personnel are military personnel. By comparison, the Air Force has approximately 37 percent of its contracting personnel as military personnel and the Air Force has not seen nearly the same increases in workload as the Army.

The impact of such numerical deficiencies has become apparent in contingency contracting operations since, in many cases, it is incredibly difficult to find civilian employees willing to volunteer for these positions, due to the dangers of working in a war-zone. Because recruiting civilian volunteers is difficult, much of the workload is handled by military personnel. Consequently, because of Army shortages in numbers of contracting personnel, the Air Force has provided over 67 percent of the military contracting resources supporting the Army ground forces for operations in Iraq and is even overseeing most of the complex contract actions for reconstruction operations (Commission on Army Acquisition and Program Management in Expeditionary Operations, 2007). While the Army has undertaken recent efforts to bolster the number of General Officers in key acquisition and contracting positions, evaluations must be ongoing to ensure the proper numbers of personnel are in place, at all times. As

contingency contracting efforts are likely to be pervasive for years to come, effective oversight and management can only occur if the proper numbers of military personnel, and seniority, are assigned to perform vital acquisition functions.

Finally, beyond contingency contracting, reductions in military personnel in other acquisition fields such as engineering can also be detrimental, since those military personnel can better understand and relate to the operational users. Because the acquisition workforce has a mixed composition, with members from the military, civilian ranks, and private industry, it is important that the proper number of military personnel (especially at the highest levels) are present to effectively represent the warfighters through key phases of the acquisition cycle.

Education and Training.

As well as reductions in personnel, for some time a general disinterest has existed within the military for some acquisition positions, such as those in contracting. This sentiment can be traced to the fact that, historically, contracting was considered an administrative position with less potential for promotion for those individuals seeking a military career. Consequently, acquisition functions have been seen as peripheral in importance to other functions to be completed by members of the military. Only recently have serious efforts been undertaken to ensure that appropriate training, in various acquisition fields, was provided to military personnel. For example, during the 1980's the services only provided limited industrial management training for military officers that were to be assigned to key management positions within major acquisition programs (Snider, 1996). Because of this fact, a limited number of billets have been historically available for acquisition officers; creating a disincentive for younger officers to pursue this career path if they desired to remain in the military for an extended period of time. Recent efforts, under the Defense Authorization Act of 2009 to increase billets for acquisition officers, are only a first step in attempting to resolve the issue and attract members of the military to become professionals in acquisition career fields.

One of the biggest examples of individuals who have lacked proper training and experience can be found in support for Operation Iraqi Freedom and Operation Enduring Freedom. Specifically, because of incredible differences between contracting in-theater and contracting at home, those military acquisition personnel who arrive for a contingency operation are often unprepared. In particular, the focus of much training in acquisition fields, such as contracting, is on systems acquisition, which often overlooks the importance of skills needed for buying support services. As a result, military personnel sometimes lack the knowledge of different processes that are typically needed for contingency contracting—work which focuses primarily on simplified, and rapid, acquisitions (Commission on Army Acquisition and Program Management in Expeditionary Operations, 2007).

Additional concern has been raised over the role of Contracting Officer's Representatives (CORs), and the potential that many serving in these roles have limited training to do so. A COR is an individual who is assigned by a contracting officer to assist in the monitoring, management or administration of a contract. These individuals, typically, have other jobs and take on COR responsibilities as an ancillary duty. In the contingency environment, COR responsibilities have traditionally been assigned to a junior individual who may have functional area expertise but little or no experience serving as a COR. In this environment, CORs serve incredibly important roles assisting contracting officers, due to the high volume of support contracts; however, the use of individuals who are inadequately trained, simply to fill an urgent need, may (in fact) do more harm than good (Commission on Army Acquisition and Program Management in Expeditionary Operations, 2007).

Further, despite DoD's dependence on CORs, there is a general lack of information available about this group's composition within DoD's acquisition workforce. For example, in 2009, it was noted in GAO's testimony that there was no clear picture of how many CORs existed, or what their training and skills may be (Weigelt, 2009). While there have recently been minor improvements regarding the training of CORs—including the use of a training class—this course may not be enough to ensure that these very

important members of the acquisition workforce are properly trained, given the importance of their position.

Impacts on the State of the Acquisition Workforce.

The severe reduction in numbers of military members of the acquisition workforce, along with a lack of requisite training and education for some of those in key acquisition positions, has significant impacts on the state of the overall acquisition workforce. First, the reduction in numbers of personnel on the military side (despite an incredible increase in contracting dollars and actions) has placed a tremendous burden, and added pressure, on civilians and contractors to get the job done. Furthermore, the severe reductions in personnel, and lack of appropriate training, have now also increased prospects for fraud, waste and abuse. For example, in 2007, as noted by the Army Criminal Investigation Division (CID) Command, there were at least 78 open fraud cases involving a total of 103 personnel in military operations taking place within Southwest Asia. Of this group, 83 individuals were Army enlisted and officer personnel—a truly disproportionate ratio (Commission on Army Acquisition and Program Management in Expeditionary Operations, 2007). The inappropriate actions that were undertaken by this group were possible due to a lack of personnel performing oversight functions and poor training with respect to rules and regulations.

Besides added prospects for fraud, waste, and abuse, the impact of using under-qualified members of the military to perform key acquisition functions can be significant. For example, the hasty appointment of CORs directly contributes to the potential for poor acquisition outcomes. While recent efforts have been undertaken to provide CORs with added training, this is only the beginning for getting this portion of the acquisition workforce properly qualified. The COR position must be treated as a professional position within the acquisition workforce and not merely an added chore to be performed by whomever may be available. Furthermore, DoD must do a better job of tracking who its CORs are, how much training they have, and how much time they are devoting to supporting contracting officers instead of performing their primary job duties.

Finally, across all services there is a long-standing tendency to simply view people who serve in the military as interchangeable parts, believing that they are capable of achievement simply because of their rank or specialty. Such an approach fails to give full consideration to the individual talents held by each member of the military and who, in particular, may be well suited to fill a selected acquisition position (Wardynski, 2009).

In sum, we believe that the combination of a reduction in the number of military acquisition personnel, in conjunction with some individuals filling acquisition positions without the appropriate training and education, directly contributes to producing negative acquisition outcomes and is detrimental to the required current state of the acquisition workforce.

Civilian Employees.

Finally, the civilian component of the acquisition workforce provides the backbone of the day-to-day functions in support of DoD's acquisition operations. Over the past several years, the mission of this group has undergone radical changes (as discussed previously) as well as the emergence of two unique features: 1. major reductions in personnel; and, 2. the aging of the workforce. Both of these features have substantial impacts on the current state of the acquisition workforce and its efforts to respond to the new dynamics of the acquisition environment.

Reduction in Personnel.

Following the end of the Cold War, a severe reduction in acquisition personnel took place as DoD had an infrastructure that far outweighed its anticipated demands for the future. As a consequence, without much strategic planning for the future (in terms of both recruitment and retention), DoD downsized its acquisition workforce significantly, a decision that ultimately influenced the later choice to supplement the acquisition workforce via "contractor augmentation."

"Contractor augmentation" was implemented as a means to provide short-term, on-demand support, without the commitment and overhead required to sustain a larger,

federal workforce. In some cases, this reliance has put DoD in a difficult management position, as the appropriate numbers of civilian personnel are no longer available to oversee and manage all of the contractors. This has been noted in recent GAO reviews, where it has been highlighted that the Department does not even collect or track information on contractor personnel, including the precise number of contractor employees it has, or the functions which they are performing (GAO, 2009). The lack of such vital information contributes directly to difficulties with long-term acquisition human capital planning, as estimating the appropriate number of government personnel needed to complete certain tasks becomes nearly impossible. In addition, a lack of accurate information on contractors in the workforce adds to potential for personal and organizational conflicts of interest in the event that the proper numbers of government personnel are unavailable to oversee and monitor contractor activities.

The reduction in numbers of DoD acquisition personnel occurred primarily between 1989 and 1999, when DoD's acquisition workforce decreased by roughly half, due to several acquisition reforms, base realignments, congressional legislation, and base closures. As a result, there now exists a deficiency with respect to proper skills and experience of the workforce, and inadequate numbers to meet current contracting demands—not to mention the loss of institutional knowledge that will undoubtedly occur once additional members of the workforce retire in the near future (United States Government Accountability Office, 2002). The reduction of the workforce was shown in Figure 1, where, despite recent steady increases in procurement spending, their numbers continued to decline slightly, even in the post 9/11 era.

Aging of the Workforce.

The second issue facing the state of the acquisition workforce is the age of its members. A significant proportion of the workforce is at or near retirement age. Without careful planning, the potential exists for a major turnover of acquisition workforce personnel in the future, ultimately leading to a severe decrease in institutional knowledge as well as the short-term possibility of an increased workload for those employees who remain on

staff. While about 31 percent of the private sector workforce is 50 or older, some 46 percent of the federal workforce is 50 or older (Dinan, 2010). Within DoD, an even higher percentage of its workforce is at or near retirement age. For example, in 2005 the “Baby Boomers” and “Silent Generation” within DoD made up roughly 76 percent of the acquisition workforce; thus, a disproportionate number of employees are either ready to retire or approaching retirement age as can be illustrated by Figure 3 below (Anderson Jr., 2008).

Generation	National (2005)		DoD (2006)		DoD AT&L Civilian Workforce (2006)	
	Workforce (millions)	% Workforce	Workforce	% Workforce	Workforce	% Workforce
Silent Generation (born before 1946)	11.5	7.50%	45,625	6.70%	8,322	7.40%
Baby Boomers (1946 to 1964)	61.5	42.00%	438,971	64.50%	77,779	68.70%
Generation X (1965 to 1976)	43.5	29.50%	132,948	19.50%	17,581	15.50%
Generation Y (1977 to 1989)	31.5	21.00%	62,676	9.20%	9,394	8.30%
Millennium (1990 to Present)	51	0%	153	0%	0	0%
		100%		100%		100%

Figure 3. Distribution of Workforce by Generation. (Under Secretary of Defense for Acquisition, Technology & Logistics, 2007).

Further, when looking at Figure 4, a clear distinction can be made in the distribution of the workforce by years of service at the 20-24 year mark, along with low separation rates for this group as well. These separation rates are significantly lower than the separation rates for employees serving 19 years or less. Such factors contribute directly to the current demographic make-up of the workforce, and open the door for problems including: 1) potential for large losses should employees decide to retire en masse; and, 2) major increases in retirement spending in the future for both pay and benefits (not to mention the fact that many of those who retire will need to be replaced, adding further expenses).

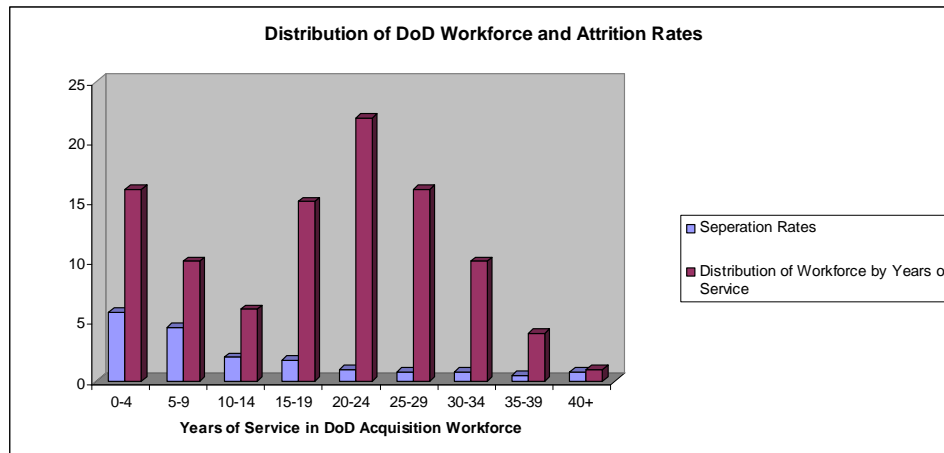


Figure 4. Distribution of Workforce by Years of Service. (Gates, 2008).

In addition, when looking government-wide at data on occupational series, average ages within the 1101 (General Business and Industry) and 1102 (Contracting) series were 47.11 years old and 46.26 years old respectively in FY2008. For the 1105 (Purchasing) and 1106 (Procurement Clerical and Assistance) series occupations, the average ages were 49.25 and 49.92 years respectively. Thus, the trend is clear the “age factor” within the acquisition workforce is not isolated to DoD alone but rather is a fact faced government-wide and has serious implications for contributing to significant turnover in the workforce due to increased retirements in the years to come (Federal Acquisition Institute, 2009).

Further, when comparing new hires to retirements, it is evident that the replacement rates are not nearly great enough to stem the upcoming tide of older workers who will retire. For example, some 13 percent of those members of DoD’s civilian acquisition workforce who are in the contracting series were eligible to retire in 2008. However, 30 percent of those in the contracting series will be eligible to retire in 2013, and about 50 percent will be eligible to retire in 2018. Furthermore, when looking at new hires versus employee losses, for 2008, DoD hired only 2228 new employees in the contracting series, while they lost some 2291 employees to agency changes or occupation series changes. The result is actually a net loss in contracting series personnel for the year, despite both increasing requirements and spending (Federal Acquisition Institute, 2009).

A final issue related to retirements within the DoD's acquisition workforce is the variation in retirement decision-making trends between those employees who are subject to the Federal Employee Retirement System (FERS) and the Civil Service Retirement System (CSRS). CSRS is a defined-pension-based system that provides employees generous, defined retirement benefits, paid in large part by the government. Alternatively, FERS, developed as a replacement to CSRS, has three components: a significantly smaller defined pension benefit plan, social security, and a thrift savings plan (an employee contribution plan with government matching funds). The FERS employees are vested after 5 years, and, since the benefits have a degree of portability, these employees are more likely to be mobile. On the other hand, CSRS has no benefits for individuals who leave or leave early. Due to these conditions, the CSRS program provides an additional incentive for workforce members to remain Federal employees until they are eligible to retire with maximum benefits (Gates 2008). The impact of this is an internal division within the civilian acquisition workforce: certain individuals are more likely to change jobs or retire earlier than others. Depending on the distribution of this group within DoD, such a division has the potential to negatively impact the state of the workforce, thus accessibility to institutional knowledge and, ultimately, acquisition outcomes—for example, in instances where members of one retirement system make up a majority of a particular office or department.

Impacts on the State of the Acquisition Workforce.

The reduction in civilian acquisition personnel and the aging of the workforce has had a tremendous impact on the overall state of DoD's acquisition workforce. Impacts include: 1. differences in workforce generations; 2. a lack of modern technical skills; and, 3. the establishment of large numbers of "career Federal employees" (i.e. those holding out until eligible for full retirement benefits).

Differences in workforce generations.

Because such a large number of acquisition workforce employees are older, on the whole, their familiarity with newly developed, rapidly changing information systems may be

limited. Resistance to change has been endemic in this group, as their experience and training has been primarily rooted in the Cold War period. Workforce generations can be characterized into several different classifications including the “Silent Generation,” “Baby Boomers,” and “Generation X’ers.”

Besides age, numerous differences exist in each of these generations’ outlook on work and approach to completing their responsibilities while on the job. For example, those more mature members of the workforce also tend to be relatively conservative (both financially and socially); highly value sacrifice, discipline, and teamwork; and likely lack skills and knowledge pertaining to modern information technology. Comparatively, those workforce members that are part of the “Baby Boomer” generation are often said to be idealists, show individualism, and seek self-improvement. This generation was responsible for building the first computers and wireless communications devices; as a result they are more attuned to technology than the previous generation. Finally, the youngest members of the acquisition workforce likely fall into the “Generation X” category, which is also known as the “me” generation. These individuals are said to be “the first to be shaped by the mass media,” and often find technology as a highly influential component of their lives. Members of this generation often embrace diversity and focus on life/work balance, entrepreneurial spirit and pragmatism (Forman, 2005).

The differences that exist in these workforce generations cannot be ignored, as these different generations are required to function as a part of the same workplace environment, and understanding of their differences and similarities is a key to effectively managing workplace performance and team relationships. Finally, generational differences could be a specific factor influencing inefficiency within the workplace, as maintaining productive work relationships are ultimately hinged on the ability of different generations to effectively communicate and interact with each other.

Lack of technical skills.

Due to the downsizing of DoD's acquisition workforce, which resulted in gutting many of DoD's internal technical competencies (since the younger generation were the first to go) DoD was forced to increase its dependence on the private sector to provide specialized technical support. In addition to this shortage of technical skills, a severe mismatch has also emerged between the career experiences of many current DoD acquisition employees and the requirements currently found within the twenty-first century acquisition environment. Many employees began their service in an era where pen and paper, along with typewriters, dominated the world of DoD contracts. For example, some 63 percent of government information technology workers are 45 years of age or older—a sure sign that younger IT professionals are currently not the backbone of the workforce (Otto 2010). Consequently, as modern technology swept across the business world in recent years, the DoD has been slow to adopt information technology and implement existing commercial best-practices.

Differences in workforce generations are directly tied to variations in technical skills among acquisition workforce employees in two categories: 1. technical skills required to use common, modern business technology; and 2. technical skills required to actively participate in highly technical acquisitions of systems. The first category can be defined as those skills needed for day-to-day use of modern computer systems for organizational and project management tasks (such as general knowledge of word processing and spreadsheet software programs, etc.). The second category can be defined as those highly technical skills needed to effectively participate in the acquisition of programs involving hardware and software, systems development and engineering, biotechnology, nanotechnology, etc. The absence of these two types of technical skills can have two negative impacts: first, they can lead to resistance to the adoption and use of all available tools and systems for performing everyday functions; second, it can contribute to difficulty with managing the acquisition of highly-complex systems. Both of these factors can ultimately contribute to poor acquisition outcomes.

Due to the limitations of DoD's acquisition workforce, major programs have recognized that the organic workforce does not have the technical and managerial capability to oversee the integration of highly technical systems-of systems. Thus, DoD has looked to the private sector for assistance. The Army, for example, hired a contractor to act as the Lead System Integrator (LSI) for their Future Combat System (FCS). It had been estimated that roughly 95 percent of the FCS performance would be controlled by software—a significant variation from the traditional hardware-based platforms acquired by the Army in the past. The Army simply did not have personnel with the skills or experience required to manage a program with this size and scope, and had to seek outside contractor assistance. The statistics given on precisely how much contractor support was required by the Army for this program highlights the potential extent of the technical deficiencies that may exist department-wide. In the case of FCS, one estimate found 28 contractor representatives for every Army representative on the information network portion of the project. When compared to a less IT based functional area such as the manned, ground vehicles team, the ratio decreased to 15 contractors for every Army representative. Each of these numbers demonstrates the Army's vulnerabilities with respect to technical skills available for system development in-house, and can be generalized to paint a larger picture of the absence of technical skills across DoD's acquisition workforce (United States Government Accountability Office 2007). The use of LSIs has been criticized for its apparent delegation of some inherently-governmental authority to the private sector, and the increased potential for conflicts-of-interest in "make or buy" decisions. Consequently, in 2007, Congress included a provision in the National Defense Authorization Act of FY2008 that prohibited the use of LSIs starting in 2010 (Gansler, 2009b) (Grasso, 2008).

Career government employees.

Because many members of DoD's acquisition workforce have spent their entire professional careers serving the Federal government, some of these employees have little or no experience in the private sector. According to the Acquisition Workforce Competencies Survey from 2008, the average Federal government acquisition workforce employee has 21 or more years of Federal acquisition service, and is aged between 51

and 55 years old (Federal Acquisition Institute, 2009). Based on these statistics it is fair to assume that, despite perhaps a handful of short-term jobs at the beginning of one's professional career, an overwhelming amount of the typical employee's acquisition experience has been working for the government with little or no outside influences. The absence of this outside experience limits the potential for these employees to develop new skills and knowledge—such as traditional commercial best-practices.

Another consequence of having long-term career DoD employees is the internal reinforcement that occurs with respect to existing DoD-practices; ultimately leading to a resistance to change. In this case, because an employee may have spent his or her entire career working for the DoD, they may become subject to a combination of internal repetitions and little outside influence. For example, this is where many may become resistant to change because of a recurring belief that “this is how we've always done it.” Without seeing and experiencing any other way of doing things, internal reinforcement from working in the same professional environment for extended periods of time can be incredibly detrimental to reform efforts. One example of this may be where DoD had previously experimented with instituting performance-based contracting in its acquisitions, in the 1970's; however, these attempts were unsuccessful. Because a significant proportion of DoD's acquisition workforce was likely present for this, it may indeed have an impact on the resistance, internally, to implementing such performance-based acquisition initiatives in the time since (Gansler, 2010).

A final impact of this resistance-to-change mentality can be directly traced to how the acquisition workforce is responding to DoD's shift away from primarily acquiring weapons and other goods to a new focus on purchasing services. As a result, many in the acquisition environment have had their roles altered from being the “doers” to the “managers of the doers.” This shift now requires the acquisition workforce members to cede performance of day-to-day tasks to support contractors, while fulfilling management and oversight functions. This tremendous change has resulted in a new requirement for different types of skills for acquisition professionals than have been traditionally needed

for such positions—skills that could have been found by fulfilling management roles in private sector work environments.

IV. "Smart Buyers" for Twenty-First Century Requirements.

The current state of the defense acquisition workforce is unable to meet the demands required in the twenty-first century acquisition environment. Senior-level, politically-appointed acquisition personnel, military personnel, and members of the civilian workforce have serious deficiencies in skills, experience, and numbers. A balance must be struck between maintaining a workforce that has the proper numbers and is also competent, adaptable, and able to ramp up for additional workloads in times of high demand. In short, workforce quantity is not a viable substitution for workforce quality.

To achieve this level of quality, we believe the acquisition workforce must be transformed into "smart buyers" for the twenty-first century. To accomplish this, we believe the acquisition workforce should: 1. have stable, experienced leadership; 2. be flexible; 3. be technologically savvy; 4. be focused on performance; and, 5. be ethical.

Stable, experienced leadership.

Stable, experienced leadership is of utmost importance for DoD's acquisition workforce. All too often policies are not properly implemented and progress is lost due to rapid turnover of individuals at the senior levels of the Department and within the Services. Stability of experienced people, within the leadership ranks, in both civilian and military positions, can permit those functioning at the lower levels to be more successful and allow for more permanent changes in culture and attitude. Because many of the following desired traits for the workforce will be new and different, implementation can only occur if a clear, consistent message is provided from the top. Furthermore, stable leadership ensures that those individuals responsible for implementing change can be held accountable for any failures. We believe stable, experienced leadership is the cornerstone to DoD's acquisition workforce development efforts.

Flexible.

We believe the desired twenty-first century acquisition workforce must also be flexible and able to switch focus on short notice as unpredictability and variations in warfighting and operational requirements will dominate mission planning in the years ahead. What this means for an individual member of the workforce is that they should possess a wide-range of knowledge and skills (which should be constantly evolving) in order to effectively meet future acquisition needs.

Skills of particular importance are in two distinctive areas. First, acquisition personnel must have requisite business and economic skills to ensure they are capable of making best-value decisions. These skills place added value on those personnel who have undergraduate or advanced degrees in business studies or other subject areas related to management, leadership, economics, finance, or accounting. Second, the acquisition workforce will also require members with advanced technical skills. Vital skills needed include knowledge of systems engineering, hardware and software development, biotechnology, nanotechnology, etc. Those workforce members that contain multiple skill sets in these areas, or have cross training, are also highly desirable. For example, a program manager with a bachelor's degree in engineering as well as a master's degree in business administration could provide essential expertise in two areas, and would likely contribute to positive acquisition outcomes.

We also believe the acquisition workforce must be well educated in order to be flexible. In the modern context, well-educated members of the workforce are those with advanced training and education. For most DAWIA certifications, an undergraduate or baccalaureate degree is already a pre-requisite; and, thus, such education is understood as a minimum standard. We believe that an added emphasis needs to be placed on workforce members obtaining advanced graduate degrees in appropriate disciplines. Of particular importance should be increasing the number of advanced degrees in science and engineering, information technology, and business.

Finally, acquisition personnel must also become focused on the DoD acquiring warfighting capabilities; as opposed to using the threat-based approach to predicting warfighter needs. To successfully meet requirements for the capabilities-based planning approach, workforce members must utilize technology, knowledge and experience to effectively anticipate what goods and services (and how much) may be required for a particular mission requirement, and then plan how best to acquire them.

Technologically savvy.

The defense acquisition workforce must also be responsive to changes in technology and advancements as they occur—this requires personnel to be able and willing to learn, throughout their careers. In this respect, acquisition workforce members must be aware of technology that can potentially support military requirements, and, technology that supports acquisition processes and productivity in the workplace.

First, personnel must be well versed in technologies that are rapidly changing, and which can impact the specific systems that they are acquiring for the DoD. In this respect, DoD's acquisition workforce must recognize and understand rapid technological advancements as they occur, such as major improvements in information technology, biotechnology, nanotechnology, etc., which can directly impact the state of a current acquisition program. Those members of the acquisition workforce who work outside of direct research and development should maintain minimum levels of competency related to new technical capabilities that exist across the defense industry, and in the commercial world, as they occur.

Further, acquisition workforce personnel should also be knowledgeable about the commercial market, so they may seek to maximize the use of commercial-off-the-shelf (COTS) solutions, in their DoD acquisitions. As funding will likely be limited in the future, utilization of existing technology from the commercial marketplace can ultimately lead to improved performance, with significant cost savings as well as faster, more efficient acquisitions—especially in cases where the technology curve is accelerating faster than the development cycles within DoD's acquisition environment. In order to

make these acquisitions effectively, those personnel directly involved must be aware that such potential exists; and this requires a proactive, on-going assessment of the current commercial market.

Secondly, the workforce must be aware of developments that will permit them to be more effective and efficient in the workplace. Members of the acquisition workforce must be competent and comfortable with information technology solutions that can assist with, and automate, acquisition processes, as well as interface with other enterprise business systems.

Focused on performance.

The acquisition workforce must also be sensitive to the new performance-based business environment, which will put a premium on efficiency, effectiveness, and best-value decision-making. For the acquisition of services, this requires an understanding of performance-based methods of acquisition, such as performance-based logistics (PBL) and performance-based services acquisition (PBSA). For the acquisition of goods, this requires an understanding of how to make acceptable cost, performance, and schedule trade-offs during all phases of the acquisition cycle. Members of the acquisition workforce must be performance-minded in the execution of their day-to-day duties and be invested in the process. Personnel should be properly motivated and incentivized to ensure performance targets are being met and, if necessary, implement corrective action when needed.

Ethical.

Accountability for actions is highly important, both for the members of the acquisition workforce, and for the purpose of maintaining a legally compliant and ethical work environment that does not violate the public trust. As such, it is vital that a culture of mutual legal and ethical behavior is cultivated, whereby the acquisition workforce is not only accountable for its own conduct, but also that of the contractors that they have hired to support them.

In DoD's efforts to modernize its acquisition workforce, it must focus on ensuring its personnel are constantly trained in ethical and legal behavior. Further, in an environment where conflicts-of-interest can occur, due to a large presence of contractors supporting DoD's acquisition workforce, it is important that a culture of ethical behavior is fostered and extends beyond government employees alone.

V. Challenges.

Several challenges exist that must be overcome in order to successfully transform the acquisition workforce, for the twenty-first century, to the desired state we have outlined. Of these challenges, retention and recruiting of new employees are perhaps the most important, in addition to overcoming experience gaps and addressing the emergence of organizational conflicts-of-interest. The following section will briefly discuss each of these challenges, as faced by DoD in its efforts to reform the acquisition workforce.

Retention.

While retention rates government-wide are generally high, when compared to the private sector, as DoD's acquisition workforce continues to age, retaining highly-skilled employees in certain positions will be increasingly difficult. Aside from the aforementioned difficulties in retaining political appointees, additional issues have arisen with regard to retaining workforce members with in-demand skills and experience. This group falls into two categories: 1. those newer employees who fall under FERS for their retirement benefits, and who are potentially mobile after five years of DoD service because the benefits are portable; and, 2. those members of the workforce who are part of CSRS and have become eligible for retirement making them mobile as well. Because there are particularly high demands in the private sector for those workforce members with defense acquisition experience, particularly in certain career specialties such as contracting, program management or engineering, private sector employment becomes highly attractive to these individuals.

To begin with, DoD may have difficulty, in the future, in retaining current employees with in-demand skills and experiences due to the low wages it offers its workforce. Typically, federal government jobs do not pay as much as their counter-parts in the private sector. According to the U.S. Bureau of Labor statistics, federal pay is roughly 25 percent lower than pay in the private sector for similar jobs. Such a difference in salary incentivizes many current members of the workforce, who have the requisite expertise, to leave the DoD.

While, some recent research indicates that money matters less than non-pecuniary benefits for those who choose public sector employment—such as insurance, vacation/personal leave, job security, etc.—this may not necessarily apply to DoD (Lewis, and Frank, 2002). For example, according to FAI’s 2008 Acquisition Workforce survey, those in the GS-1101 (General Business and Industry) and GS-1102 (Contract Specialist) job functions at DoD earn roughly 23 percent and 11 percent less, respectively, than the salary paid (on average) to their counterparts in civilian government agencies (Federal Acquisition Institute 2009). This fact alone may impact employee decisions to remain employed within DoD, as opposed to transferring to other government agencies or leaving the public sector all together, for the private sector instead.

An additional concern that has recently been raised by members of the acquisition workforce are the added rules and restrictions that make government employment undesirable compared to parallel opportunities in the private sector. More specifically, current employees noted concerns over the complexity of DoD’s acquisition rules and performance accountability. As noted by one scholar, retaining employees is becoming increasingly difficult because of the rising number of regulations in the work environment. Consequently, additional oversight and lack of flexibility now makes many nervous that they could potentially be punished in the event that negative contracting outcomes occur, despite their adherence to all acquisition guidelines (Kauffman 2008). While added regulations and oversight may be well-intentioned, it may be contributing to a hostile or uncomfortable work environment. Consequently, individuals who have alternative opportunities, allowing greater workplace flexibility, may be more likely to leave the DoD. At a minimum, the regulations and oversight could foster a risk-adverse, inflexible culture.

Finally, in the event retirees were willing to come back and work for DoD after they left, current rules exist which prohibit their re-hiring without a cut in pay equivalent to their existing pension benefits. Such restrictions make return to government employment after

retirement incredibly unattractive when compared with the potential flexibility and salary available for similar positions in the private sector (Davidson, 2009).

In short, those members of the acquisition workforce with in-demand skills, and mobility in retirement benefits, may find more lucrative opportunities in the private sector. DoD will be challenged with finding ways to retain these employees, in order to ensure their institutional knowledge and much-needed experience remain present within the workforce.

Recruiting.

Beyond retention of current employees is the additional problem of recruiting new acquisition workforce personnel. Problems with recruitment occur as a result of several factors. First, a shrinking talent pool—particularly in highly-technical areas—will lead to increased recruitment problems in the future. Given retirements and loss of current employees for other reasons, it is estimated that job growth in the science and engineering fields will occur at roughly three times the pace of other positions in the workforce. Despite this massive increase in demand however, the number of U.S. science and engineering graduates remains flat, which will directly contribute to DoD's difficulties in recruiting acquisition professionals (Anderson Jr., 2008). These levels of science and engineering graduates can also be tied to a larger problem in the U.S. educational system where incredibly low numbers of highly-qualified teachers and professors in science and engineering make it incredibly difficult to properly educate students (National Academy of Sciences, 2006). Without a basic educational system that is structured to train students in high-demand areas, such as the hard sciences and engineering, DoD will continue to face severe difficulties in recruiting hireable employees with technical expertise.

Second, in some cases, where highly-talented individuals with in-demand technical backgrounds do exist, DoD is unable to hire them because they do not meet requirements to obtain a security clearance, or are unable to work for the government because they are

non-citizens.¹⁰ For example, National Science Foundation data shows that in the United States, for 2005, foreign students earned 34.7% of the doctorate degrees in the sciences and approximately 63.1% of the doctorate degrees in engineering. Furthermore, those foreign students on temporary resident visas earned 30.8% of the doctorates in the sciences, and some 58.6% of the doctorates in engineering (Matthews, 2008).

The impacts these statistics have on DoD's ability to recruit are significant. First, U.S. citizenship is an essential component for the granting of a security clearance, and federal employment in general—without citizenship, these foreign scientists and engineers are unable to work for DoD. As foreigners compose a significant portion of the talent pool available to DoD for recruitment, their inability to obtain security clearances and citizenship needed for employment shrinks the available pool of qualified personnel available to DoD acquisition workforce modernization.

Second, as noted by multiple sources, DoD's recruitment process takes too long and creates severe delays for potential employees. In many cases, such delays result in many applicants simply giving up, due to the volumes of paperwork required and the slow responses, which can typically take several months. In July of 2002, for example, the National Academy of Public Administration reported that Federal "hiring remains a slow and tedious process," and that "current hiring methods [did] not keep pace with the private sector" (National Academy of Public Administration, 2002). This sentiment was further articulated by the Merit Systems Protection Board (MSPB) who noted that "one of the most common complaints about the Federal hiring process is that it takes too long" (United States Merit Systems Protection Board, 2006).

Furthermore, according to the MSPB, a "large majority believe it should take no longer than 8 weeks to fill merit promotion jobs with internal or external candidates," however

10 Executive Order 11935 permits the hiring of non-citizens with Office of Personnel Management approval only when there are no qualified citizens available. A non-citizen hired in the absence of a qualified citizen may only be given an excepted appointment, and does not acquire competitive civil service status. He or she may not be promoted or reassigned to another position in the competitive service, except in situations where a qualified citizen is not available. The non-citizen may be hired only if permitted by the appropriations act and the immigration law (President of the United States, 1976).

this desired timeline is almost never met. Evidence to support such a claim can be found by examining the number of days required to hire employees into the Federal system. In 1999, a Merit Systems Protection Board survey found that supervisors estimated it took some 204 calendar days from the time the approval process began to fill a vacancy through when the selectee was notified and actually hired. Later, in 2003, the GAO reported it took an average of 102 business days (from the time the request was initiated through when the applicant finally received an offer) to complete all of the steps required to fill a government position via the competitive hiring process (United States Merit Systems Protection Board, 2006).

As a result of extended timelines, GAO found that significant delays in hiring had a direct influence on candidate interest in the positions—as application decisions are delayed, candidates become less interested (and in some cases unavailable) to fill the position once an offer is made. For one agency which GAO examined, it was found that only 1 in 20 applicants (or 5 percent) who were offered a job, were still interested in the position, due to the severe delays in hiring (United States Government Accountability Office, 2003). This is further supported by a MSPB survey respondent who stated that the time between applying and the time the applicant was called for an interview was unacceptable. The applicant had ultimately given up because he/she believed they were not getting a job offer (United States Merit Systems Protection Board, 2006).

One direct cause of hiring delays can be traced to the fact that DoD does not offer a single, streamlined, online process for submitting applications to jobs. Application procedures vary widely by agency or office, with some accepting online applications and others requesting submission of applications in hard copy or fax; as can be seen from an examination of current job postings on www.USAJOBS.gov (the federal government job posting website). While some applications can be processed using the website, many job postings simply provide instructions on how to apply and re-direct an applicant to a different website where applicants are tasked with creating an additional user profile and resume for the purposes of submitting an application. These variances in application procedures contribute to a cumbersome application process, and ultimately deter potential

applicants from applying because of the additional work that is required to be considered for multiple positions.

In addition, wide variances in application processes within the government make it difficult for applicants to understand what needs to be done to apply. According to a 2001 survey of college students from the National Association of Colleges and Employers, it was found that 37 percent of respondents did not understand the application process for Federal employment (United States Merit Systems Protection Board 2006). Comparatively, in the private sector, many large firms have created a single, integrated system for vetting and processing applicant information and providing real-time status updates, making application submission relatively easy and substantially faster. Furthermore, many private sector firms also utilize existing online hiring solutions, such as HotJobs.com or Monster.com to receive, process, and manage applications. DoD's inability to streamline its hiring process to mirror those of successful private-sector firms is a significant barrier to acquisition workforce modernization.

Experience Gaps.

An additional challenge that exists for effectively modernizing the acquisition workforce for the twenty-first century are the gaps between the life and work experiences of current employees and the skills needed to support new DoD mission requirements. While measures such as the Defense Acquisition Workforce Improvement Act (DAWIA) have been implemented for the purposes of enhancing the training and skills of employees serving across all facets of DoD acquisition, they have not necessarily been effective to ensure that the proper mix of skills and experience are achieved by acquisition personnel. For example, the DAWIA requirement for specific qualifying experience within a given functional area can be limiting to career development for civilian employees. These DAWIA standards make it difficult for an employee to gain parallel experience in related fields for the purposes of diversifying their backgrounds. Thus, in many cases civilians become limited to a single functional career path—many times, in a single location—a factor that limits flexibility and ability to contribute to a wide range of acquisition needs (Garcia, 1997).

Furthermore, the workforce currently lacks technical skills and experiences as a result of both the reduced numbers of acquisition personnel and the aging of the workforce itself. As a result, in-house capabilities at DoD have been severely limited in terms of both volume of capable personnel and the breadth of their experiences. One example (as noted above) is the roughly 28 to 1 contractor/DoD employee ratio on the Army's FCS for highly technical areas, such as information network portion of the project. Such an imbalance highlights DoD's dependence on outside support for highly technical development projects, due to its own depleted internal technical capacities.

In addition to a lack of technical skills and experience, other areas such as contracting and project management have experience gaps as well. As can be summarized from the 2008 Federal Acquisition Institute survey, Federal employees themselves indicated where severe skills gaps exist. For example, when Federal program managers were surveyed they indicated that competency gaps existed in areas such as contracting, business, cost estimating, and financial management. Further, Federal contracting employees who were surveyed indicated a need for additional training in performance-based acquisition, financial management, dispute resolution, defining requirements, and negotiation (Federal Acquisition Institute, 2009). When such skills are explicitly required for these positions, and the employees themselves (in their own self-assessment) acknowledge experience shortfalls, it highlights where the workforce's vulnerabilities exist.

Finally, DoD must take steps to understand the competences of its workforce and assess their skills and experiences on a regular basis. As of April 2009, only 21,000 members of the 126,000 member defense acquisition workforce completed competency assessments (Assad, 2009). The failure to accomplish these assessments, in a fast and efficient manner, degrades the ability of DoD to properly evaluate the state of its workforce, and delays the introduction of proper training initiatives to correct deficiencies in the skills of existing personnel.

Management of Blended Workforce.

DoD's current acquisition workforce model is based upon leveraging a blend of civilian, military, and contractor personnel to perform key acquisition functions. This blended workforce requires a unique approach to management and presents a host of additional challenges. Of particular concern are issues with: 1. understanding the definition of "inherently governmental" work that must be performed by DoD personnel; 2. avoiding conflicts-of-interest; and, 3. having a complete view of workforce composition and functions.

The first difficulty to overcome within the blended workforce model is properly identifying what functions are considered "inherently governmental." A widely accepted definition of "inherently governmental" functions is those functions which must be performed by the Federal government because they are "intimately related to the public interest" and cannot be contracted out. An example of an "inherently governmental" function that is performed routinely by acquisition personnel is the evaluation of proposals and awarding of contracts. With the volume and complexity of DoD's acquisitions, this definition has been subject to many interpretations, which are not always consistently applied. Clarity on this subject is critical, both to maintain the integrity of the acquisition process, as well as for future human capital planning.

In late March 2010, the Office of Management and Budget (OMB), Office of Federal Procurement Policy, released a draft memo in which it clarified the definition of "inherently governmental" work. While this memo is not finalized, it does offer a sample of definitions which could go into effect. The memo makes three proposed changes to current DoD policy regarding the subject. First, the memo proposes the adoption of the FAIR Act definition of "inherently governmental function" as the single government-wide definition of this term, i.e. "an activity" is inherently governmental when it is so intimately related to the public interest as to mandate performance by Federal employees.

Second, the memo proposes providing guidance for determining the criticality of functions by identifying criteria for determining when positions dedicated to performing

critical functions must (or should) be reserved for Federal employee performance. However, most federal workers feel their work is “critical”—therefore all work is “critical.” Finally, the memo proposes that agencies should be required to develop agency-level procedures, conduct training, periodically review internal controls, and designate one or more senior officials to be responsible for implementation and maintenance of the policy (Office of Management and Budget, 2010). The major impact of this memo is the new set of ambiguities it creates, inside the Department, as specific interpretation and implementation policies and procedures must be created, DoD-wide, to ensure compliance with the memo’s guidance.

The second difficulty that must be overcome is the issue regarding personal and organizational conflicts-of-interest.¹¹ Recently, both of these issues have become major causes of concern, given questions over some political appointees as well as the increased use of contractors to provide support to DoD acquisition personnel.

With respect to political appointees, personal conflicts-of-interest have been raised as issues of concern when a former high-ranking industry employee is presented as a potential political nominee. While, on one hand, several high-level acquisition positions require industry experience; on the other hand, questions have been raised over the prospect of such industry experience contributing to favoritism or bias toward particular firms, once a nominee is appointed. This situation makes it challenging for any nominee with the requisite industry experience, as required by law, to be confirmed without raising questions over the potential for personal conflicts-of-interest.

¹¹ **Personal conflicts-of-interest (PCI)** occur when actions are influenced by a desire for personal gain. Conflicts-of-interest among government employees have always been a concern. Contractor employees often work inside DoD facilities, when supporting the DoD acquisition workforce, creating a blended, multi-sector workforce.

Organizational conflicts-of-interest (OCI) occur when a contractor has an interest that might bias the firm’s judgment, or create an unfair competitive advantage because of impaired objectivity (which can arise when the work involves evaluation), unequal access to information, or biased ground rules. Even when firms have established “firewalls,” there can still be the appearance of organizational conflict-of-interest.

On a broader scale, organizational conflict-of-interest problems arise when DoD personnel or contractor employees are performing functions that may come in conflict with the interests of their firm, drawing into question whether the contractor is able to successfully complete their job without biasing the outcome toward their own company's advantage. Accordingly, some government officials believe that not enough is being done to prevent organizational conflicts-of-interest, given the acquisition workforce's dependency on contractor support. For example, a firm may have a consulting contract with a program office, while another division from the same firm may be competing to do development work for the very same program. Further, there is some concern of the impact of adding additional controls, including questions regarding increased costs and decreased efficiency, which have been raised regarding negative impacts of conflict-of-interest reform.

Currently, there are significant numbers of contractor employees that work directly with DoD acquisition personnel and support them in their daily functions. In some cases, this is because the government may not have the required number of people with the required technical skills. In other cases, these contractors were brought on board because programs have struggled to hire personnel for authorized in-house positions. The inability to fill these positions can be directly tied to DoD's difficulties in recruiting qualified candidates for available jobs. Of some 50 major weapon systems programs recently reviewed by GAO, it was found that only 19 (or 38 percent) were able to fill all authorized in-house staffing positions. In many of these cases, contractors have been brought in to maintain program continuity (Government Accountability Office 2010). Of course, in all of these cases, the critical issues are whether the contractors are performing inherently-governmental functions (or simply supporting the government workers who are) and, secondly, whether these contractors have any conflicts-of-interest.

As of April 2009, DoD estimated some 52,000 contractor personnel were performing acquisition support functions. Based on these numbers, contractor personnel represent some 29 percent of DoD's total acquisition workforce. Still, the presence of contractors within various acquisition offices varies significantly, and can greatly exceed the 29

percent estimate. For example, based on one GAO review of 21 DoD program offices, 15 (or roughly 71 percent) of the offices had more contractor personnel than government employees. Within these 15 offices, contractor personnel comprised some 88 percent of the workforce (United States Government Accountability Office, 2009). Such statistics demonstrate the general level of dependence DoD has on contractors supporting its acquisition workforce (again, whether this causes problems depends upon the two, above-noted issues i.e. inherently-governmental and conflict-of-interest). Ironically, in this blended workforce environment, the personal conflict-of-interest regulations that apply to the government workforce (as can be seen from Figure 5) do not apply to contractor employees (United States Government Accountability Office, 2009).

Prohibition, restriction, or requirement	Applicable to federal employees?	Applicable to DOD contractor employees?
Bribery, kickback, other graft	Yes	Yes
Participating in matter affecting personal financial interest	Yes	No ¹²
Avoiding appearance of partiality when performing duties	Yes	No ¹³
Disclosing financial interests	Yes	No ¹³
Accepting travel and gifts	Yes	No ¹³
Using nonpublic information for personal gain	Yes	No ¹³
Future employment contact	Yes	No ¹³
Misusing position to provide preferential treatment to a private interest	Yes	No ¹³

Figure 5. Government vs. Contractor Conflict of Interest Prohibitions. (United States Government Accountability Office, 2009).

Moreover, in April of 2010, DoD released information on proposed rules it wishes to establish for the purposes of minimizing OCI. The memo proposed an organization of rules concerning OCIs, the introduction of standard provisions and clauses (provided contracting officers retain the ability to modify these as needed), and expansion of coverage for OCI rules to address unique situations (such as task and delivery orders) (United States Department of Defense, 2010).

A third major challenge with the blended workforce environment, beyond OCI and PCI, is DoD's difficulty in tracking the number of contractors supporting its workforce, as

¹² There may be other laws and regulations that may apply to DoD contractor employees depending on the facts and circumstances of a particular case.

well as the functions contractors are performing. In short, DoD's knowledge is particularly limited with respect to how contractor personnel are being used, and what skills they are providing to supplement deficiencies in DoD's acquisition workforce—making effective strategic planning virtually impossible.

VI. Recommendations.

To successfully overcome the previously mentioned barriers, and to achieve the desired state of the acquisition workforce, we recommend the following actions be taken:

Increase Stability for Senior Acquisition Leadership.

Frequent changes in senior leadership often lead to significant changes in an organization's priorities, goals, and strategy. These changes can also significantly impact relationships with partnering organizations. Frequent leadership turnover can also insulate and strengthen the existing organizational culture. Long-term, or permanent, employees may be reluctant to participate in organizational change initiatives that significantly change their day-to-day responsibilities when the leaders who initiated these changes are not present to see them through; this makes improving processes more difficult.

At the program level, the lack of sustained leadership often contributes to program delays and setbacks, which can create tension among stakeholders. To the degree possible, senior government leaders must ensure that there is program continuity, especially with key program leaders. All possible actions should be taken to ensure consistent program leadership by maintaining stability of key personnel (allowing for promotions in place is one way to encourage this).

Develop the Required Human Capital.

In order to effectively develop the required human capital for the modern acquisition environment, we believe that DoD must enhance its recruitment processes; improve the hiring process; strive for quality not quantity; provide competitive wages; incentivize employees for improved performance; and, incentivize employees for additional training and education.

Enhance recruitment.

Improving the acquisition workforce will require a greater focus on recruitment of entry-level/mid-level acquisition personnel. Recruiting *Generation Xers* and *Millennials*, however, presents several challenges. First, is finding them. This will require understanding where these individuals look for jobs; this often includes specialty websites and social networking sites. Second, is to make the organizations appealing to these job-seekers. The younger generations are often not motivated in the same way as their older predecessors, and in many ways are looking for different work experiences.

We believe one approach worth developing and expanding are intern programs. These cooperative programs could include scholarships, coupled with an internship, and finally employment, following successful completion of the program. Such an effort would aid in shoring up the composition of the workforce and assist in maintaining stability as a significant number of older workforce members are nearing retirement. Furthermore, additional recruitment incentives and specialized internship programs could be created for those students who excel in high demand functional areas such as information technology and the hard sciences.

Some agencies already have operating programs. The Defense Logistics Agency hires more than 200 interns each year and The Defense Contract Management Agency (DCMA) hires approximately 100 interns per year (Anderson Jr. 2008). Additionally, the Navy Acquisition Internship Program (NAIP), another example, has recently been expanded to permit 500 new interns per year (Thomsen 2009). Further expansion of these and similar programs is highly desirable, given the demographics of the acquisition workforce, and shortages of personnel in key fields.

Additionally, DoD must ensure it is placing emphasis on creating internship programs that are specifically designed for recruitment of career employees. In short, DoD must target interns who are well suited for direct employment following the completion of the internship. For those internship programs which seek to simply hire interns for

temporary periods—such as those designed for students over the summer—DoD must actively track how such programs impact DoD recruitment in the long-run.

It must also be noted that the simple expansion of an intern program, does not address the entire recruitment issue. According to a recent RAND analysis, while it was true that NAIP participants were promoted quickly once brought aboard in a full-time capacity, after just five years of employment participants in the NAIP were neither more or less likely to remain working for the Navy, or even the Defense Department than others who did not participate in the program (Gates 2009). DoD must capitalize on the inherent value provided by intern programs to attract highly capable talent, successfully train them, and potentially match intern skills and experiences with a suitable career opportunity.

In addition to internships, another effective recruitment tool could be the expansion of collaborative educational programs between the DoD and universities. One example of a successful program that currently exists is between Warner-Robins Air Logistics Center and Macon State University. The arrangement permits Warner-Robins employees and university students to take classes specifically designed jointly by the Air Force and the university to focus on contracting studies. In the program, Macon State University has been able to condense ten Defense Acquisition University contracting courses into three college level courses which can be taken for credit (Defense Acquisition, Technology and Logistics, 2008).

Further, students who take part in the program are then offered opportunities to gain hands-on experience by working at the logistics center (Federal Acquisition Institute, 2009). The partnership has been highlighted as being successful on multiple fronts. Not only does the program create a potential recruiting pipeline by providing ready-to-work employees; it also permits other individuals who may be working in the private sector an opportunity to learn about DoD contracting as well. Programs like this should be expanded to aid in generating ready-to-work personnel in the talent pool (Defense Acquisition, Technology and Logistics 2008).

Improve the hiring process.

Although there are some exceptions, DoD's current hiring processes take too long, are too complex, discourages new and mid-level entries, and frequently do not maintain a consistent mechanism for "process" compliance. This is often exacerbated by the time required to obtain a security clearance once an employee is hired. As a result, many applicants get frustrated, give up, and seek employment elsewhere. Efforts to improve DoD's hiring process must be accelerated.

Recently the OMB issued important policy requiring Federal Agencies to improve hiring practices. First, they must map the agency's hiring process from start to finish; second, they must ensure job announcements are clearly produced; third, they must communicate with applicants during the application process to advise them of their applications status. And, finally, hiring managers must be actively engaged at all phases of the hiring process (Davidson, 2009). These reforms must be implemented immediately and their impact must be periodically evaluated to perpetuate continuous improvement.

Strive for quality not quantity.

As DoD downsized its workforce, it lost much of its in-house capability and diminished the overall quality of its internal talent pool. In DoD's effort to modernize the workforce, it must also seek to ensure it is creating a quality workforce, instead of merely seeking to meet quantity goals. Quality can be defined as recruiting those individuals with in-demand skills, unique experiences and interdisciplinary expertise. Key fields requiring high quality personnel include the sciences, engineering, information technology and business.

Provide competitive wages.

Additionally, DoD must provide competitive wages to recruit and retain members of its acquisition workforce. While government employment does offer the prospect of substantial benefits and relative job security, it does not compete well with the private sector in terms of wages, especially within the acquisition workforce. Compensation packages must be revised as necessary to ensure current employees and potential new

hires are well paid with salaries comparable to the private sector. While it is likely that it will be difficult to meet the standard of private-sector salaries, dollar-for-dollar, we believe an incentive-type pay structure will be key to ensuring that employees are properly compensated.

Incentivize employees for improved performance.

Another desirable quality for the acquisition workforce is that they are properly incentivized for improving performance outcomes. Reform must begin with workforce performance accountability. The current system within DoD has created an environment that is highly removed from the conditions of the traditional labor market, whereby lower and mid-level government employees remain for extended periods of time, performing the same functions, (potentially at low levels of performance) with the prospect for little or no performance accountability.

Like the private sector, DoD acquisition personnel should be incentivized for performance. In the private sector, there is widespread agreement that pay-for-performance systems are successful within organizations that have strategic policies providing top-down guidance and direction for their implementation. Furthermore, such success is also highly dependent upon employees' perceptions of performance within the organization itself (Murray, 2009). In other words, for these programs to work, they must be properly communicated from the top of the organization, and performance expectations and standards must be widely accepted and understood among employees.

Within the context of DoD acquisition, performance can refer to the efficiency and performance of employee actions, the amount of money a program has saved, the timeliness of employee activities—even, perhaps, for contracting personnel—the rates that contracts are protested and sustained. In all of these cases, some type of compensation (either in terms of promotion or pay) could be applied to those DoD employees that meet high performance standards for some or all of the metrics noted above.

A recent effort to include performance incentives for members of DoD's workforce via the National Security Personnel System (NSPS)¹³ faced significant resistance from multiple sources (including the employee union, the American Federation of Government Employees) and was ultimately repealed in the FY2010 Defense Authorization Act (Corrin, 2010). Because NSPS had only been operational for a short period, the opportunity for program reform and long-term evaluation was lost. This concern was highlighted by Dr. John Crum of the United States Merit Systems Protection Board who noted that: "pay-for-performance systems may need to evolve over time, as part of a regular evaluation and modification process to ensure that they are fostering the achievement of organizational goals" (Defense Business Board, 2009).

Although the NSPS initiative has been repealed, DoD should continue to evaluate the use of pay-for-performance systems through the implementation of pilot programs. Historically, DoD has undertaken numerous demonstration projects which have used alternative pay systems. Examples include the Navy's "China Lake" project, DoD's AcqDemo project, and DoD's Laboratory Demonstration Program. In addition, members of the Senior Executive Service (SES) are currently under a performance-based pay system that exists government-wide. These programs have consistently demonstrated that performance-based pay systems can work in the DoD with proper attention given to both change management and leadership. These programs have further shown that the highest performing employees can be paid the most; that performance – not time – can be an effective driver of pay; that costs in these programs are controllable; that work levels can be broadly defined; and, that sensitivity to specific locations and occupations can be achieved (United States Office of Personnel Management, 2005). Recent efforts in Congress, undertaken to implement performance incentives and included in the IMPROVE Acquisition Act,¹⁴ should be examined for implementation by DoD as well.

13 NSPS was a pay-for-performance pay system that sought to replace the traditional General Schedule (GS) grade pay system, for federal employees within DoD, with a pay band system that would permit flexibility in setting pay rates, hiring, firing, reassignment, and performance measurement.

14 Provisions within the IMPROVE Act demand greater accountability from the acquisition workforce, improve financial management, expand the industrial base to increase competition, and reward members of the acquisition workforce who save DoD money (Matthews, 2010).

This Act includes provisions to reward employees for cost savings within the DoD acquisition community through increased rates of pay or promotion (Matthews, 2010).

We believe DoD should comprehensively examine these pilot programs (both past and present) to evaluate which features could be further implemented in other programs, across DoD, to provide performance incentives to members of its acquisition workforce.

Provide incentives for additional training and education.

We also believe that major incentives must be created for employee training and educational advancements, to ensure the workforce continues to expand its capabilities and is properly motivated to do so. Without such motivation, members of the workforce have little incentive to seek additional training or education. By encouraging training and education, employees will gain additional knowledge and bring that knowledge into the workplace, allowing for process improvements, along with increased efficiency and performance.

We believe it is not enough to merely pay for training, as many programs within the government currently permit, but rather employees must also be properly compensated either through direct reimbursements or faster advancements. Additional training in key areas that are vital to job functions (such as law, contracts, accounting, etc. for contracting personnel, or systems engineering, software, hardware, etc. for engineering personnel) can have an immediate impact on productivity and ensure that employees are aware of recent changes within the industry and current best practices.

Further, employees should be rewarded even more for seeking additional education (such as advanced degrees or professional certifications) in high-demand fields, such as information systems, networking, systems engineering etc. Potential rewards could include not only pay increases or bonuses but also opportunities for rapid promotion. Such an effort not only helps close the current technical knowledge gap, but also enhances the capabilities of the workforce. Ultimately, this effort could reduce the need for contractor personnel to be involved in those highly technical functions that may also

be considered critical, or bordering on “inherently governmental,” or raise prospects for conflicts of interest, purely because DoD is unable to supply properly-qualified personnel.

Finally, it must be recognized that often the managers of acquisition workers (due to the shortage of skilled workers and the heavy workloads) are reluctant to allow their people to take the time off for the desired education. Thus, staffing plans (especially for the civilian workforce) must be based on the assumption (as the military plans do) that some percent of the people will be in training at any given time, thus removing the current disincentive to such training.

Improve Workforce Agility.

Another key to modernizing the acquisition workforce, for the twenty-first century environment, is to ensure that its members are agile enough to appropriately respond to rapidly-changing requirements. To foster this agility, we recommend increased use of rotational programs between government, academia, and industry; as well as the use of incentives for government civilian personnel to deploy overseas during contingency operations.

Provide rotational programs between Government, academia, and industry.

Rotational programs can inject new perspectives into the acquisition environment and should be greatly expanded. While there currently is an Acquisition Exchange Program at DoD, its size and scope should be broadened significantly to include a new emphasis on rotations outside of DoD, with academia and industry, in addition to rotations within the Federal government. We believe the introduction of a rotational program for acquisition personnel would be highly beneficial, for increasing and enriching the knowledge and experience of DoD’s acquisition workforce, as well as encouraging information sharing and the introduction of new perspectives. For example, DoD personnel who gain experience in the private sector, through a rotation, can then bring that knowledge back into DoD. Such knowledge can permit DoD to more aptly capitalize on commercial best-practices that may otherwise remain unknown.

Rotational programs also provide an incentive for attracting, for recruiting, training and hiring high caliber entry and mid-level employees. Internal rotational programs have been immensely successful when implemented by other Federal departments, such as the Department of the Interior and the Department of Veterans Affairs (FAI, 2008). There is every reason to believe that external rotational programs would have similar, if not greater, impacts. It should also be noted that the benefit of rotational programs do not simply serve potential new hires, but also older and more experienced employees as well. In addition to reducing the potential for employee turnover, by keeping jobs both interesting and challenging for long-time employees, rotational programs can also permit the development of new skills for these employees and assist in overcoming the current experience gap which exists within certain sectors of the workforce.

Finally, the DoD should make greater use of the potential of bringing in mid-level and senior-level industry people (with the needed critical skills) for term assignments (e.g. a three year rotation, outside of the civil service system). This approach has been used very successfully in the past (e.g. through a program covered by Public Law 80-313) and is currently provided in limited numbers for selected positions (e.g. positions in DARPA). Conflicts-of-interest can be explicitly avoided, and it can be a win-win-win situation—benefiting the government, with experienced people; the company, when the employee returns with an understanding of how government works; and the employee, with a greatly-broadening experience.

Eliminate disincentives to deploy.

An additional factor that must be addressed to enhance workforce agility is the inherent disincentive for civilian acquisition workforce members to deploy overseas in contingency environments. Obviously, conditions in a warzone are not ideal for members of the civilian workforce. However, because these personnel may be required to carry out important functions on-site, DoD must take the appropriate steps to effectively recruit these personnel to volunteer for deployment during wartime in order to support contingency operations. A first step would be to provide additional financial

incentives, including an equivalent to Hazardous Duty Pay (HDP) for deployed civilian acquisition personnel. As defined by the Defense Finance and Accounting Service (DFAS), HDP permits up to 25 percent additional pay to GS employees who are performing hazardous duty which could result in serious injury, or death or duty that requires experiencing physical hardship that could cause extreme physical discomfort or distress (Defense Finance and Accounting Service, 2009). This definition should be expanded to include a provision for GS employees operating in a war-zone. Furthermore, income earned by GS employees during deployment should also be given the same “tax free” earning benefits as military service members currently receive; and any so-called “pay cap” restrictions must be removed (Commission on Army Acquisition and Program Management in Expeditionary Operations, 2007).

Additional important changes must also be made with respect to policies regarding supplemental life insurance and long-term care insurance coverage for civilian workforce members who are deployed. Because most standard life insurance policies have clauses that exclude “acts of war” as a coverable cause of death, civilian employees must receive some type of supplemental insurance specifically designed to cover potential deaths that could occur during a deployment. With respect to long-term care, while injuries sustained during deployments are covered, any needed long-term care, once a civilian returns home, is excluded. Civilians who are injured while in-theater should receive the same long-term care benefits as active duty-military personnel. Such “piece of mind” may be the determining factor for civilian employees who decide to take on the additional risk of working in a war-zone (Commission on Army Acquisition and Program Management in Expeditionary Operations, 2007).

Finally, some type of pre-deployment training should be provided, to permit civilians to effectively prepare and acclimate themselves to the situation on the ground in the contingency environment. Not only will such training improve readiness, but it will also provide confidence and reassure those members of the acquisition workforce, who are to be deployed, that they have the basic skills and knowledge needed to function within a

war-zone. Provision of this training could make deployed civilians feel more prepared to go overseas and reduce their hesitancy to volunteer.

Adapt to blended workforce and partnering environment.

The blended workforce and government/industry partnering environment has created unique management challenges for DoD's acquisition workforce. In order to successfully adapt to this environment, we believe DoD must: 1. identify inherently governmental functions; 2. identify any critical positions that need to be performed by DoD personnel; and, 3. develop approaches to eliminate organizational and personal conflicts-of-interest.

Identify "inherently governmental" functions.

While DoD and other agencies within the Federal government have developed guidance for identifying "inherently governmental" functions, it is generally fairly broad; and, as a result, it is often inconsistently interpreted. We believe clear guidance must be provided to departments and agencies so they can unambiguously identify those individuals performing the narrow band of work that is truly "inherently governmental."¹⁵ That work must be performed by either military or DoD civilian employees. Other tasks can be considered for contractor support. The Office of Management and Budget's (OMB), Office of Federal Procurement Policy, recently released draft memo is a beginning to creating new guidance for those functions which are to be considered "inherently governmental", but may still be overly broad. We believe further examination of these definitions, and the implications of their adoption, should be undertaken within DoD.

Identify "critical positions" that need to be performed by government personnel.

In addition to the establishment of a clear line between what is "inherently governmental" and what is suitable for contracting out, a clear distinction must also be made for support functions that are required to directly assist those carrying out "inherently governmental"

¹⁵ Currently, the Office of Management and Budget, Office of Federal Procurement Policy is working on new guidelines to define three categories of work: inherently governmental, closely associated with inherently governmental and critical functions. As of the date of this report a draft memo of these definitions was issued in the Federal Register: March 31, 2010 (Volume 75, Number 61). However, they are very broad, and unnecessarily easy to make overly restrictive over private sector employment.

tasks. More specifically, while certain “critical positions” may not be considered “inherently governmental,” it may be beneficial for DoD employees to complete these tasks, particularly for that small number of experts providing critical evaluations and advice on issues driving contractor-supported programs. Therefore, DoD should identify those positions, and ensure they are filled by qualified military or DoD civilians. As noted previously, the recent draft memo released by the Office of Federal Procurement Policy is a good beginning to clearly define those “critical positions” which must be performed by government personnel. We believe examination of these definitions and the impact of their implantation throughout DoD should be evaluated carefully, as there truly are only a minimum of them.

Develop approaches to eliminate organizational and personal conflicts-of-interest.

Finally, we also believe that to successfully modernize the acquisition workforce for the twenty-first century, conflicts-of-interest must be reduced to the maximum extent possible. Members of the acquisition workforce should utilize contractors for maximization of efficiency only in areas that will not contribute to organizational conflicts-of-interest. This is increasingly difficult, since vertical integration within the defense industry has greatly reduced the number of firms that are not a part of a major developer/integrator. New approaches, such as using companies not part of the historical defense contracting community, or the creative use of limited liability companies (LLC) and/or proxy structures (to create independent entities that can provide a service) must be implemented; and the existence of independent firms (e.g. those providing support to program offices, and/or doing architecture and systems engineering or systems-of-systems) should be encouraged.

Moreover, since contractors can potentially have significant influence over many government program decisions, those individuals should be subject to the same personal conflict-of-interest policy as government employees. These should cover areas such as: their stock holdings, spouse employment, and gifts. DoD should develop a consistent policy for contractors regarding personal conflicts-of-interest, and then require the selected contractor to enforce the policy.

VII. Conclusion.

In the second decade of the twenty-first century, the United States will face a diverse set of trials that include a prolonged economic recession, significant budget deficits, global warming, escalating health-care costs, the need for education reform, and threats to homeland security. And, with the interconnected global environment, new challenges will continue to emerge suddenly and unexpectedly—as highlighted by the continued terrorist threat and recent “swine flu” pandemic. At the same time, the United States is also struggling to transform and modernize its military forces, so it can effectively provide the capabilities required for the future national security environment. One key factor in transformation of the U.S. military, for the twenty-first century, is its acquisition workforce. In its current state, however, DoD’s acquisition workforce is not adequately structured to meet modern demands.

To meet these requirements, we believe DoD should center its efforts on creating “Smart Buyers”, who have the skills and experiences to successfully support defense acquisition in the twenty-first century. This must be viewed as one of DoD’s top priorities—the nation’s security depends on it.

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